



## FIELD SURVEY DATA

# FEASIBILITY STUDY FOR INSTALLATION OF UMCS FORT RILEY, KANSAS

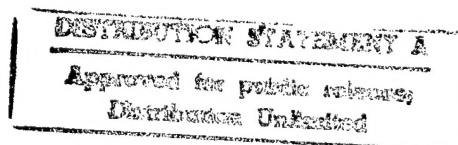
## ENERGY ENGINEERING ANALYSIS PROGRAM (EEAP)

Prepared for

U.S. ARMY CORPS OF ENGINEERS  
KANSAS CITY DISTRICT  
KANSAS CITY, MISSOURI

Under

U.S. ARMY ENGINEER DISTRICT, MOBILE  
INDEFINITE DELIVERY A-E CONTRACT  
CONTRACT NO. DACA01-94-D-0033  
DELIVERY ORDER NO. 0001



DENVER, COLORADO  
ATLANTA, GEORGIA



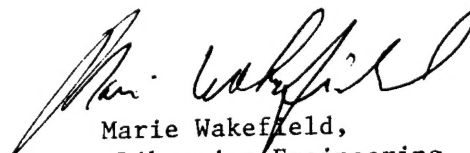


DEPARTMENT OF THE ARMY  
CONSTRUCTION ENGINEERING RESEARCH LABORATORIES, CORPS OF ENGINEERS  
P.O. BOX 9005  
CHAMPAIGN, ILLINOIS 61826-9005

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**FIELD SURVEY DATA**

**FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
FORT RILEY, KANSAS**

**ENERGY ENGINEERING ANALYSIS PROGRAM (EEAP)**

Prepared for

U.S. Army Corps of Engineers  
Kansas City District  
Kansas City, Missouri

**DTIC QUALITY INSPECTED 2**

Under

Contract No. DACA01-94-D-0033  
Delivery Order 0001  
EMC No. 1406-001

19971017 061

July 1995

By

EMC Engineers, Inc.  
2750 S. Wadsworth, Suite C-200  
Denver, Colorado 80227  
303/988-2951

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/4/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0003

BLDG NAME: POST CHAPEL

ELECTRIC METER: N

CONDITIONED SQFT: 4,340

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 40

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0003

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: ALL

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 4,800

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: COMFORT AIRE

UNIT MODEL: SW90-3BA

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 40

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 60

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/4/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0003

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: 2

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: CLARAGE FAN COMPANY

UNIT MODEL: S: 85454

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 40

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ N  
RET AIR DMPR CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N

MIXED AIR DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N

IMPLEMENT DEMAND LIMIT CNTRLS? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0003

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

% AREA HEATED BY BB RADIATION:

**NAMEPLATE**

BOILER MFG: KEWANEE

UNIT MODEL: 8656

BLR CAP OUTPUT (BTUH): 600,000

BLR CAP INPUT (BTUH): 750,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 40

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

OPERATING SETPOINT: 7 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0003 BLDG NAME: POST CHAPEL  
REF. UNIT NUMBER/TAG: CT-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: COOLING TOWER

**NAMEPLATE**

CHILLER MFG: CHILLER MODEL: CHILLER SERIAL NO:  
CHILLER V: 0 CHILLER AMPS: 0 CHILLER PH: 0  
CHILLER CAP (TONS): 0  
TOWER MFG: MARLEY AQUA TOWER  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.75  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 40 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: BELL & GOSSETT  
PUMP SERVICE: COND WATER PUMP (CNW) PUMP MODEL:



**EMC ENGINEERS, INC.**

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LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/4/94

PREPARED BY: AJN/DEJ/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0006

BLDG NAME: POST CHAPEL

ELECTRIC METER: N

CONDITIONED SQFT: 6,230

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 40

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: AJN/DEJ/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0006

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CT-1

SERVES AREA: NAVE/OFFICES

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000

CFM-CLG: 4,000

MIN %OA: 30

MAX %OA: 100

## NAMEPLATE

UNIT MFG: CARRIER

UNIT MODEL: 50BT012500

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 40

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 76

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 80

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐

MIXED AIR DMPR CONTROL: ☐

IMPLEMENT DEMAND LIMIT CNTRLs? ☐

MAX OA DMPR CONTROL: ☐

ECONOMIZER DB CONTROL: ☐

TIME CLOCK: ☐

RET AIR DMPR CONTROL: ☐

ECONOMIZER WB CONTROL: ☐

TIME CLOCK OPERATIONAL? ☐

EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/4/94

PREPARED BY: AJN/DEJ/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0006

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CT-1

SERVES AREA: NAVE/OFFICES

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000

CFM-CLG: 4,000

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 50BT012500

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 40

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 76

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 80

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

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EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: AJN/DEJ/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0006  
AHU NUMBER: AHU-3  
AHU LOCATION: NORTH MER  
REFRIG SYS # SRVNG AHU: CT-1  
SERVES AREA: CLASSROOM  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 900  
MIN %OA: 0

CFM-CLG: 900  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: COMFORT AIRE BY HEAT CONTROL  
UNIT MODEL:  
SUPPLY FAN HP: 0.12  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 40  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: AJN/DEJ/AMS

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0006

BOILER RM LOCATION: NORTH MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> CENTRAL PLANT DIRECT	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 25

BOILER MFG:   
UNIT MODEL:   
BLR CAP OUTPUT (BTUH): 600,000  
BLR CAP INPUT (BTUH): 750,000  
COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 40 MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 150 DEG F or PSIG  
TYPE OF BURNER CONTROLS: OTHER  
RESET CONTROLS: N  
CONTROLS COMMENTS: 2-STAGE

#### HW PUMP

PUMP TAG: 1 PUMP HP: 0.12 PUMP MFG: GENERAL  
PUMP SERVICE: HW PUMP PUMP MODEL: 5KH32EG1298X

#### HW PUMP

PUMP TAG: 2 PUMP HP: 0.12 PUMP MFG: GENERAL  
PUMP SERVICE: HW PUMP PUMP MODEL: 5KH32EG1298X

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/4/94

PREPARED BY: AJN/DEJ/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0006

BLDG NAME: POST CHAPEL

REF. UNIT NUMBER/TAG: CT-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU 1-3

UNIT TYPE WATER COOLING TOWER

**NAMEPLATE**

CHILLER MFG:   
CHILLER MODEL:   
CHILLER SERIAL NO:   
CHILLER V:  0  
CHILLER AMPS:  0  
CHILLER PH:  0  
CHILLER CAP (TONS):  0

TOWER MFG: MARLEY  
# OF TOWER FANS:  1  
TOWER FAN V:  0  
TOWER FAN AMPS:  0  
TOWER FAN HP:  1.5

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 40

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON: JAN: ☐ FEB: ☐ MAR: ☐ APR: ☐ MAY: ☒ JUN: ☒ JUL: ☒ AUG: ☒ SEP: ☒ OCT: ☐ NOV: ☐ DEC: ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:  0CNWS SETPOINT:  0CWR SETPOINT:  0CNWR SETPOINT:  0

PRESS LITE HI:  N  
PRESS LITE LOW:  N  
PRESS GAUGES:  N

TEMP LITE HI:  N  
TEMP LITE LOW:  N  
TEMP GAUGES:  N

OTHER INDICATORS:

CONTROLS COMMENTS: **CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: 

PUMP SERVICE: COND WATER PUMP (CNW)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:

ELECTRIC METER:  CONDITIONED SQFT:

GAS METER:

SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

32 HEAT PUMPS HEAT AND COOL THE BUILDING THROUGHOUT. BUILDING IS PREPPED FOR EMCS.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0027

BOILER RM LOCATION: BASEMENT EAST

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:** HALF OF BLDG.☒ **BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: TELEDYNE LAARS

BLR CAP OUTPUT (BTUH): 405,000

UNIT MODEL: VW 0500

BLR CAP INPUT (BTUH): 500,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0027

BOILER RM LOCATION: BASEMENT EAST

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: HALF OF BLDG.

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: TELEDYNE LAARS

UNIT MODEL: HH0400CN12HBACX

BLR CAP OUTPUT (BTUH): 329,000

BLR CAP INPUT (BTUH): 400,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: 1QA48517D717J

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0027 BLDG NAME: OFF QTRS MILIT  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: FC  
UNIT TYPE OTHER

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATORS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: ZVN18TTDR7026DJ

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0027 BLDG NAME: OFF QTRS MILIT  
REF. UNIT NUMBER/TAG: CWP-2 LOCATION (MER#): MER  
AHU'S SERVED: FC  
UNIT TYPE: OTHER

## NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

## CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	MARATHON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	ZVN184TTDR7026DJ

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

**PREPARED BY: AJN/CWW**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0029

BLDG NAME: RED CROSS BLDG

ELECTRIC METER: N

**CONDITIONED SQFT:** 3,000

**GAS METER:** ☒ Y

**SUSPECT ACM:** N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 26

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0029

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 60

AHU UNIT TYPE RESIDENTIAL FURNACE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,250

CFM-CLG: 2,250

MIN %OA: 10

MAX %OA: 10

**NAMEPLATE**

UNIT MFG: BRYANT CARRIER

UNIT MODEL: 394GAW048150A

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 26

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0029

AHU NUMBER: AHU-2

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 40

AHU UNIT TYPE RESIDENTIAL FURNACE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,500

CFM-CLG: 1,500

MIN %OA: 10

MAX %OA: 10

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAW036100

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 26

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SU

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0029 BLDG NAME: RED CROSS BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	BRYANT	TOWER MFG:	
CHILLER MODEL:	569E042	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	1.2
CHILLER AMPS:	22.8	TOWER FAN HP:	0.2
CHILLER PH:	1		
CHILLER CAP (TONS):	6		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 26 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0029

BLDG NAME: RED CROSS BLDG

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: BRYANT  
CHILLER MODEL: 569E030  
CHILLER SERIAL NO:  
CHILLER V: 230  
CHILLER AMPS: 18.7  
CHILLER PH: 1  
CHILLER CAP (TONS): 5

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 230  
TOWER FAN AMPS: 1.2  
TOWER FAN HP: 0.2

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 26

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0200

BLDG NAME: ADMIN GEN PURP

ELECTRIC METER: ☒ Y

CONDITIONED SQFT: 60,690

GAS METER: ☒ NSUSPECT ACM: ☒ N**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200  
AHU NUMBER: HP-1  
AHU LOCATION: ZONE PERIMETER  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: BASEMENT  
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: HEAT PUMP  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,270  
MIN %OA: 0  
CFM-CLG: 11,270  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 3.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

AHU NUMBER: HP-2

AHU LOCATION: ZONE PERIMETER

REFRIG SYS # SRVNG AHU:

SERVES AREA: NORTH WING 1ST FLR

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,660

CFM-CLG: 6,660

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

AHU NUMBER: HP-3

AHU LOCATION: ZONE PERIMETER

REFRIG SYS # SRVNG AHU:

SERVES AREA: SOUTHWING 1ST FLR

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,910

CFM-CLG: 5,910

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

AHU NUMBER: HP-4

AHU LOCATION: ZONE PERIMETER

REFRIG SYS # SRVNG AHU:

SERVES AREA: NORTHWING 2ND FLR

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,470

CFM-CLG: 8,470

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

AHU NUMBER: HP-5

AHU LOCATION: ZONE PERIMETER

REFRIG SYS # SRVNG AHU:

SERVES AREA: SOUTH WING 2ND FLR

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,480

CFM-CLG: 7,480

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

AHU NUMBER: HP-6

AHU LOCATION: ZONE PERIMETER

REFRIG SYS # SRVNG AHU:

SERVES AREA: AUDITORIUM

% OF BLDG AREA HEATED: 27

AHU UNIT TYPE HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000

CFM-CLG: 8,000

MIN %OA: 13

MAX %OA: 13

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 4

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

BOILER RM LOCATION: MER BASEMENT

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: M-205-KX

BLR CAP OUTPUT (BTUH): 2,050,000

BLR CAP INPUT (BTUH): 2,562,500

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

BOILER RM LOCATION: MER BASEMENT

**BOILER UNIT**SOURCE OF BLDG HEAT ☒ BLR/CONVERTER SERVES AREA OR SERVICE: ☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE: ☐ CENTRAL PLANT DIRECT**NAMEPLATE**% AREA HEATED BY BB RADIATION:  0

BOILER MFG: KEWANEE

UNIT MODEL: M-205-KX

BLR CAP OUTPUT (BTUH): 2,050,000

BLR CAP INPUT (BTUH): 2,562,500

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**PUMP TAG: PUMP HP: PUMP MFG: PUMP SERVICE: PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0200

BOILER RM LOCATION: MER BASEMENT

#### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: HWP-1 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:  
COMMENTS:

BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
CONTROLS COMMENTS:

RESET CONTROLS: N

#### HW PUMP

PUMP TAG: 1 PUMP HP: 50 PUMP MFG: MARATHON  
PUMP SERVICE: COND. LOOP WATER PUMP PUMP MODEL: TJ324TSTDR7001DNW

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0200

BOILER RM LOCATION: MER BASEMENT

**BOILER UNIT**SOURCE OF BLDG HEAT ☐ BLR/CONVERTER SERVES AREA OR SERVICE: ALL☐ **BOILER**

BOILER TAG: HWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 50

PUMP MFG: MARATHON ELECTRIC

PUMP SERVICE: COND. LOOP WATER PUMP

PUMP MODEL: TJ324TSTD7001DNW

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0200 BLDG NAME: ADMIN GEN PURP  
REF. UNIT NUMBER/TAG: CT-1 LOCATION (MER#): EAST OF BLDG.  
AHU'S SERVED: ALL HEAT PUMPS  
UNIT TYPE: COOLING TOWER

**NAMEPLATE**

CHILLER MFG: TOWER MFG: AIRCOIL COMPANY  
CHILLER MODEL: # OF TOWER FANS: 2  
CHILLER SERIAL NO: TOWER FAN V: 480  
CHILLER V: 0 TOWER FAN AMPS: 3  
CHILLER AMPS: 0 TOWER FAN HP: 30  
CHILLER PH: 0  
CHILLER CAP (TONS): 0  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐  
CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: US ELECTRIC  
PUMP SERVICE: COOLING TOWER PUMP PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0200 BLDG NAME: ADMIN GEN PURP  
REF. UNIT NUMBER/TAG: CT-2 LOCATION (MER#): NORTH OF BLDG  
AHU'S SERVED: ALL HEAT PUMPS  
UNIT TYPE COOLING TOWER

## NAMEPLATE

CHILLER MFG:		TOWER MFG:	EVAPCO
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	480
CHILLER V:	0	TOWER FAN AMPS:	3
CHILLER AMPS:	0	TOWER FAN HP:	20
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: N

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 1 PUMP MFG: CENTURY  
PUMP SERVICE: COND WATER PUMP (CNW) PUMP MODEL: 8-135802-21

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/19/94

PREPARED BY: JM.AJN/AMS

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="9"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="9"/>
REQ STOP:	<input type="text" value="21"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="21"/>

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/19/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM.AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

AHU NUMBER: AHU-1

AHU LOCATION: WEIGHT ROOM

REFRIG SYS # SRVNG AHU: CT-1

SERVES AREA: WEIGHT ROOM

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/19/94

PREPARED BY: JM.AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

AHU NUMBER: AHU-2

AHU LOCATION: SKATE RINK

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: SKATE RINK

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,500

CFM-CLG: 18,500

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 28CX1428

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/19/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM.AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

AHU NUMBER: UH-1

AHU LOCATION: GYMNASIUM

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYM

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/19/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM.AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202

AHU NUMBER: UH-2

AHU LOCATION: GYMNASIUM

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYM

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE: UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/19/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM.AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

AHU NUMBER: UH-3

AHU LOCATION:

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: 2ND FLR. OFFICES

% OF BLDG AREA HEATED: 11

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,750

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/19/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM.AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

AHU NUMBER: UH-4

AHU LOCATION: LOCKER ROM

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: LOCKER RM/ RAQUETBALL CO

% OF BLDG AREA HEATED: 21

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000

CFM-CLG: 8,000

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: STEAM

☐

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:

☒☒☒☒☐☐☐☐☐☐☒☒☒**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/19/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM.AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

AHU NUMBER: UH-5

AHU LOCATION: STORAGE

REFRIG SYS # SRVNG AHU:

SERVES AREA: WOMEN'S LOCKERS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 52

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/19/94  
PREPARED BY: JM.AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0202

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE

UNIT MODEL: M425-KG

BLR CAP OUTPUT (BTUH):

4,250,000

BLR CAP INPUT (BTUH):

5,313,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 52

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/19/94  
PREPARED BY: JM.AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0202 BLDG NAME: PHYS FITNESS CTR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AE044S10AA	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	76	TOWER FAN HP:	0.43
CHILLER PH:	3		
CHILLER CAP (TONS):	45		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 52 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:	
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>		
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>		

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/19/94  
PREPARED BY: JM.AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0202 BLDG NAME: PHYS FITNESS CTR  
REF. UNIT NUMBER/TAG: CT-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: WATER COOLING TOWER

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	MARLEY
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:	10 TON CAPACITY		

### SCHEDULE

DAYS SCHEDULE NO: 52 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG:  
PUMP SERVICE: COND WATER PUMP (CNW) PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/7/94

PREPARED BY: JM/AMS/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0203

BLDG NAME: CAVALRY MUSEUM

ELECTRIC METER: N

CONDITIONED SQFT: 5,800

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/7/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AMS/AJN

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0203

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,200

CFM-CLG: 5,200

MIN %OA: 20

MAX %OA: 100

## NAMEPLATE

UNIT MFG: CARRIER

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LINCOLN

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/7/94  
PREPARED BY: JM/AMS/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0203 BLDG NAME: CAVALRY MUSEUM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE WEST  
AHU'S SERVED: AHU-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	FAN MOTORS
CHILLER MODEL:	38AE064510MOD	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	119	TOWER FAN HP:	0.43
CHILLER PH:	3		
CHILLER CAP (TONS):	60		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	N	TEMP LITE HI:	N
PRESS LITE LOW:	N	TEMP LITE LOW:	N
PRESS GAUGES:	N	TEMP GAUGES:	N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	BALDOR
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	JMML408TM00

**CW and CNW PUMPS**

PUMP TAG:		PUMP HP:		PUMP MFG:	
PUMP SERVICE:				PUMP MODEL:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/7/94  
PREPARED BY: JM/AMS/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0203 BLDG NAME: CAVALRY MUSEUM  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED:  
UNIT TYPE

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: BALDOR  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: JMLL408TM00

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/7/94

PREPARED BY: JMAJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0205

BLDG NAME: CAVALRY MUSEUM

ELECTRIC METER: N

CONDITIONED SQFT: 16,496

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 21

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	17	17	17	17	17	17	17

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/7/94

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0205

AHU NUMBER: AHU-1

AHU LOCATION: 3RD FLOOR

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 65

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400

MIN %OA: 15

CFM-CLG: 11,400

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LINCOLN

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HW	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 21

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	17	17	17	17	17	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/7/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0205

AHU NUMBER: AHU-2

AHU LOCATION: 3RD FLOOR

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,200

CFM-CLG: 6,200

MIN %OA: 0

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LINCOLN

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 21

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	17	17	17	17	17	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/7/94

PREPARED BY: JMAJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0205

BOILER RM LOCATION:

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT**

% AREA HEATED BY BB RADIATION:

**NAMEPLATE**

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

21

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	17	17	17	17	17	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/7/94  
PREPARED BY: JMAJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0205 BLDG NAME: CAVALRY MUSEUM  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED:  
UNIT TYPE CENTRAL PLANT

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 21 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	17	17	17	17	17	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/7/94  
PREPARED BY: AJN/DEJ

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/7/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0206

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,500

CFM-CLG: 13,500

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 2N9375

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 60

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/7/94  
PREPARED BY: AJN/DEJ

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0206

BOILER RM LOCATION: BASEMENT

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: TYPEC 1779

BLR CAP OUTPUT (BTUH): 786,000

BLR CAP INPUT (BTUH): 982,500

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 60

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/7/94  
PREPARED BY: AJN/DEJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0206 BLDG NAME: ADMIN GEN PURP  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CD60	# OF TOWER FANS:	6
CHILLER SERIAL NO:	8220	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	102	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	50		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 60 MONTHS SCHEDULE NO: 4  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0207

BLDG NAME: CAVALRY MUSEUM

ELECTRIC METER: N

CONDITIONED SQFT: 8,278

GAS METER: N

SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 44

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BASEMENT &amp; 1ST FLOOR

% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 650

CFM-CLG: 650

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB03BC0H

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: UVB143TTDR5327

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	HOT WATER	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 44

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BASEMENT &amp; 1ST FLOOR

% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,515

CFM-CLG: 1,515

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB03AEOH

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: UVB143TTDR5327

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 44

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLOOR

% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,050

CFM-CLG: 2,050

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB0GBEOH

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: VVB145TTDR5327

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 44

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

AHU NUMBER: AHU-4

AHU LOCATION: 1ST FLR MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: SOUTH 1ST FLOOR

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,950

CFM-CLG: 1,950

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: SNK88C10385

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 44

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

AHU NUMBER: AHU-5

AHU LOCATION: 2ND FLR MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 2ND FLR WEST ZONE

% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,180

CFM-CLG: 2,180

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: K88C10386

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 44

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: HUMIDITY ON SUPPLY AIR (VAPOR MIST) ELECTRIC CONTROLS; ELECTRIC I

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

AHU NUMBER: AHU-6

AHU LOCATION: 2ND FLR MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 2ND FLR EAST ZONE

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,145

CFM-CLG: 2,145

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE CLIMATE CHANGER

UNIT MODEL: SN K88C10387

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 44

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: HUMIDITY ON SUPPLY AIR (VAPOR MIST) ELECTRIC CONTROLS; ELECTRIC I

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0207

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

63

BOILER MFG: AJAX

BLR CAP OUTPUT (BTUH):

420,000

UNIT MODEL: WGF0525

BLR CAP INPUT (BTUH):

525,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

44

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 150 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: POWER BURNER-FUEL/AIR DAMPER

**HW PUMP**

PUMP TAG: 1

PUMP HP:

1.5

PUMP MFG: BALDOR

PUMP SERVICE:

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0207

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐

CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 44

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0207

BLDG NAME: CAVALRY MUSEUM

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1 - 6

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: RAUBC306FE00DBF23  
CHILLER SERIAL NO: J88C80830  
CHILLER V: 200  
CHILLER AMPS: 109  
CHILLER PH: 3  
CHILLER CAP (TONS): 30

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 200  
TOWER FAN AMPS: 4.1  
TOWER FAN HP: 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 44

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: UVB145TTDR5331AA

**CW and CNW PUMPS**

PUMP TAG: PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0207

BLDG NAME: CAVALRY MUSEUM

REF. UNIT NUMBER/TAG: CWP-1

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE

### NAMEPLATE

CHILLER MFG:   
CHILLER MODEL:   
CHILLER SERIAL NO:   
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 0

TOWER MFG:   
# OF TOWER FANS: 0  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 44

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	10	10	10	10	10	10
REQ STOP:	16	16	16	16	16	16	16

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: UVB145TTDR5331AA



**EMC ENGINEERS, INC.**

**PROJECT NAME:** EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:** DACA 01-94-D-0033  
**LOCATION:** FT. RILEY, KS

EMC NO: 1406-001

**DATE:** 10/6/94

PREPARED BY: AJN/AMS

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0210

BLDG NAME: MILIT PERS BLDG

ELECTRIC METER: N

**CONDITIONED SQFT:** 58,448

**GAS METER:** N

SUSPECT ACM: ☐ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210

AHU NUMBER: AHU-1

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLOOR

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 48,000

CFM-CLG: 48,000

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCBB17EE6L0

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: DDC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 1ST FLOOR  
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 7

CFM-HTG: 38,400  
MIN %OA: 10

CFM-CLG: 38,400  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL: CCBB21EEE60  
SUPPLY FAN HP: 10 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210

AHU NUMBER: AHU-3

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 2ND FLOOR

% OF BLDG AREA HEATED: 30

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 27,000

CFM-CLG: 27,000

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210

AHU NUMBER: AHU-4

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLOOR

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000

CFM-CLG: 4,000

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRNE

UNIT MODEL: CCDB08BXEM

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: E-PLUS

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 72

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 72

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 72

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 2ND FLOOR

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,100

CFM-CLG: 5,100

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB10AXEM

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 2ND FLOOR

% OF BLDG AREA HEATED: 12

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 7

CFM-HTG: 12,000

CFM-CLG: 12,000

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCBB10CEEC0

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0210

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: HYDROTHERM

UNIT MODEL: RL-1408

BLR CAP OUTPUT (BTUH):

2,033,200

BLR CAP INPUT (BTUH):

2,392,000

COMMENTS: TYPICAL OF 8

**SCHEDULE**

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRONIC

RESET CONTROLS: N

OPERATING SETPOINT: 200 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0

PUMP MFG: 5 HP - STAND-BY

PUMP SERVICE: HW PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0210 BLDG NAME: MILIT PERS BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: ALL  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: TRANE TOWER MFG:  
CHILLER MODEL: KTAA1306YC01A0D0ABDEJ # OF TOWER FANS: 8  
CHILLER SERIAL NO: TOWER FAN V: 0  
CHILLER V: 220 TOWER FAN AMPS: 0  
CHILLER AMPS: 383 TOWER FAN HP: 0.5  
CHILLER PH: 3  
CHILLER CAP (TONS): 130  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N  
CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 10 PUMP MFG: MAGNATEK  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: 6-355809-01

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0211

BLDG NAME: ADMIN

ELECTRIC METER: N

CONDITIONED SQFT: 41,062

GAS METER: N

SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 15

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0211

AHU NUMBER: AHU-1

AHU LOCATION: 3RD FLOOR

REFRIG SYS # SRVNG AHU:

SERVES AREA: AUDITORIUM

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 14,400

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 3909104

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: WAGNER

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 15

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 74

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0211

AHU NUMBER: AHU-2

AHU LOCATION: COMPUTER ROOM/BASEMENT

REFRIG SYS # SRVNG AHU:

SERVES AREA: BASEMENT OFFICE AREA

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 2,250

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: LIEBERT SYSTEM

UNIT MODEL: 3

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 15

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0211

BOILER RM LOCATION: BASEMENT

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: KEWANEE

UNIT MODEL: C 1775

BLR CAP OUTPUT (BTUH): 1,420,000

BLR CAP INPUT (BTUH): 1,775,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 15

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0211

BOILER RM LOCATION: BASEMENT

#### BOILER UNIT

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL



##### ☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

##### ☐ CONVERTER

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: KEWANEE

UNIT MODEL: C 1775

BLR CAP OUTPUT (BTUH): 1,420,000

BLR CAP INPUT (BTUH): 1,775,000

COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 15

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 5 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0211 BLDG NAME: ADMIN  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: ALL  
SOURCE OF HEATING: BLR-2 SERVES AREA:  
RADIATION UNIT TYPE: STEAM % AREA HTG: 45

### SCHEDULE

DAYS SCHEDULE NO: 15 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: 2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0211	BLDG NAME:	ADMIN
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	ALL
SOURCE OF HEATING:	BLR-1,2	SERVES AREA:	
RADIATION UNIT TYPE:	STEAM	% AREA HTG:	45

### SCHEDULE

DAYS SCHEDULE NO:	15	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	7	7	7	7	7	7	7					
REQ STOP:	23	23	23	23	23	23	23					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:			
RADIATION CONTROL:	2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB		
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N
CONTROL COMMENTS:			



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0211 BLDG NAME: ADMIN  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	LIEBERT	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	3		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 15 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐  
PRESS LITE LOW: ☐  
PRESS GAUGES: ☐

TEMP LITE HI: ☐  
TEMP LITE LOW: ☐  
TEMP GAUGES: ☐

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0214

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND EAST

% OF BLDG AREA HEATED: 31

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,120

CFM-CLG: 10,120

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0214

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST &amp; 2ND WEST

% OF BLDG AREA HEATED: 31

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,039

CFM-CLG: 10,039

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: BALDOR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: M3218T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0214

AHU NUMBER: AHU-3

AHU LOCATION: MER BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BASEMENT, 1ST, 2ND - SOUTH

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,100

CFM-CLG: 1,100

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	0214	AHU LOCATION:	MER BASEMENT
AHU NUMBER:	AHU-4		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	BASEMENT N.W.
		% OF BLDG AREA HEATED:	9
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	2,400	CFM-CLG:	2,400
MIN %OA:	10	MAX %OA:	100

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	Y	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0214

AHU NUMBER: AHU-5

AHU LOCATION: MER BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BASEMENT - N.E.

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800

CFM-CLG: 2,800

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0214

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (<15#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

15

BOILER MFG: KEWANEE

UNIT MODEL: TYPE C

BLR CAP OUTPUT (BTUH):

758,400

BLR CAP INPUT (BTUH):

948,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0214

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☒

☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: LOW PRESS STEAM (<15#)

FUEL TYPE: NAT. GAS

☐

CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

15

BOILER MFG: KEWANEE

UNIT MODEL: TYPE C

BLR CAP OUTPUT (BTUH):

758,400

BLR CAP INPUT (BTUH):

948,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0214	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:	BLR-1	SERVES AREA:	HALLWAYS AND STAIRS
RADIATION UNIT TYPE:	STEAM	% AREA HTG:	15

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL: 2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0214 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1-5  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	30A0CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	8-8712488	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	112	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: EVE182TTDR7627AB

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="11"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="10"/>
REQ STOP:	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="19"/>

### REMARKS:

Commissary Administration - North part of building on 1st and 2nd floor. Building contact: Thelma Thompson at Ext 3627.  
Mobilization Operations - Center part of building. Liquor Store - North central part of building. Cold storage - South part of building. Suspect ACM in MER on HW piping

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0222  
AHU NUMBER: AHU-1 AHU LOCATION: ATTIC  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: LIQUOR STORE/OPERATIONS  
% OF BLDG AREA HEATED: 60

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,800 CFM-CLG: 9,800  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AMERICAN BLOWER UNIT MODEL: 2A18  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: BALDOR RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: M3218T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 56 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 72 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 68 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS: HW 2-way valve located in MER

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0222

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



##### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

##### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

100

BOILER MFG: BURNHAM

UNIT MODEL: FD/10

BLR CAP OUTPUT (BTUH):

350,000

BLR CAP INPUT (BTUH):

434,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO:

56

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 165 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP:

0.08

PUMP MFG: B & G

PUMP SERVICE: HW PUMP

PUMP MODEL: UQN48517D1088M

#### HW PUMP

PUMP TAG: 2

PUMP HP:

0.13

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL: 5KH32E6129AX

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/DEJ

## BOILER AND CONVERTER SURVEY OBSERVATIONS

### HW PUMP

PUMP TAG:	3	PUMP HP:	0.08	PUMP MFG:	TACO
PUMP SERVICE:	HW PUMP			PUMP MODEL:	120

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0222	BLDG NAME:	ADMIN GEN PURP
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	ADMIN OFFICES
SOURCE OF HEATING:	BLR-1	SERVES AREA:	1ST 2ND FLOOR NORTH
RADIATION UNIT TYPE:	HW	% AREA HTG:	17

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.08	PUMP MFG:	BELL AND GOSSETT
				PUMP MODEL:	UQN48517D1088M

### SCHEDULE

DAYS SCHEDULE NO:	56	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC		
RADIATION CONTROL:	NONE		
OCC HT SPACE SP:	0	RESET CONTROL:	<input checked="" type="checkbox"/> N
UNOCC HT SPACE SP:	0		
CONTROL COMMENTS:	3-way pneumatic control valve in MER		



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0222 BLDG NAME: ADMIN GEN PURP  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): SOUTH OF BLDG  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	30A0C055	# OF TOWER FANS:	4
CHILLER SERIAL NO:	5-93-A26983	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	84	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	30		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 56 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: ZVC182TTDR8026DJ

**EMC ENGINEERS, INC.**

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CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0223

BLDG NAME: ENL BARRACKS W/DAS

ELECTRIC METER: N

CONDITIONED SQFT: 47,794

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0223

AHU NUMBER: AHU-1

AHU LOCATION: 2ND FLR MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST &amp; 2ND FLR WEST

% OF BLDG AREA HEATED: 28

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 7,450

CFM-CLG: 7,450

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: STEAM

☒

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: CW

☒**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: DDC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0223

AHU NUMBER: AHU-2

AHU LOCATION: MER 2ND FLR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST &amp; 2ND FLR EAST

% OF BLDG AREA HEATED: 27

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 7,150

CFM-CLG: 7,150

MIN %OA: 15

MAX %OA: 100

## NAMEPLATE

UNIT MFG: TRANE

UNIT MODEL: MODULAR SN K94

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: DDC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0223

AHU NUMBER: AHU-3

AHU LOCATION: BSMT MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLOOR S. WING/ BSMT W

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 5,000

CFM-CLG: 5,000

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: DDC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0223

AHU NUMBER: AHU-4

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BSMT EAST

% OF BLDG AREA HEATED: 11

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000

CFM-CLG: 4,000

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: DDC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0223

AHU NUMBER: UH-1

AHU LOCATION: N.E. STORAGE BSMT.

REFRIG SYS # SRVNG AHU:

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0223	AHU LOCATION:	N.W. STORAGE/S. STORAGE
AHU NUMBER:	UH-2		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	STORAGE
		% OF BLDG AREA HEATED:	8
AHU UNIT TYPE	UNIT HEATER	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	4,800	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input checked="" type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input checked="" type="checkbox"/>
MAX OA DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER DB CONTROL:	<input checked="" type="checkbox"/>
RET AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER WB CONTROL:	<input checked="" type="checkbox"/>
EXH AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input checked="" type="checkbox"/>
		TIME CLOCK:	<input checked="" type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input checked="" type="checkbox"/>

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0223

BOILER RM LOCATION: BSMT MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

6

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

1,860,000

BLR CAP INPUT (BTUH):

2,232,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0223 BLDG NAME: ENL BARRACKS W/DAS  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION:  
SOURCE OF HEATING: SERVES AREA:  
RADIATION UNIT TYPE: STEAM % AREA HTG: 6

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC

RADIATION CONTROL: 2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0223 BLDG NAME: ENL BARRACKS W/DAS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: ALL  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	CA2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	10997	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.8
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0227

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 32,303

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0227	AHU LOCATION:	MER 2ND FLR EAST
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	1ST AND 2ND FLR-EAST
		% OF BLDG AREA HEATED:	40
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	5
CFM-HTG:	10,120	CFM-CLG:	10,120
MIN %OA:	10	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input checked="" type="checkbox"/>
MAX OA DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0227

AHU NUMBER: AHU-2

AHU LOCATION: 2ND FLR MER WEST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND WEST FLOORS

% OF BLDG AREA HEATED: 40

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,039

CFM-CLG: 10,039

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: BALDOR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: M3218T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0227

AHU NUMBER: AHU-3

AHU LOCATION: MER BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND SOUTH BASEME

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,100

CFM-CLG: 1,100

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: Controls are in poor condition

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0227

AHU NUMBER: AHU-4

AHU LOCATION: MER BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND SOUTH BASEME

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,100

CFM-CLG: 1,100

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☒MIXED AIR DMPR CONTROL: ☒IMPLEMENT DEMAND LIMIT CNTRLS? ☒MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☒TIME CLOCK: ☒RET AIR DMPR CONTROL: ☒ECONOMIZER WB CONTROL: ☒TIME CLOCK OPERATIONAL? ☒EXH AIR DMPR CONTROL: ☒

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0227  
AHU NUMBER: AHU-5 AHU LOCATION: BASEMENT MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: BASEMENT NE  
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800 CFM-CLG: 2,800  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0227

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: TYPE C

BLR CAP OUTPUT (BTUH): 758,400

BLR CAP INPUT (BTUH): 948,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0227

BOILER RM LOCATION: MER-WEST

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: TYPE C

BLR CAP OUTPUT (BTUH): 758,400

BLR CAP INPUT (BTUH): 948,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0227 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,3,4,5  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	BOHN	TOWER MFG:	
CHILLER MODEL:	VRB0655B	# OF TOWER FANS:	2
CHILLER SERIAL NO:	BCI8097	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	16.2
CHILLER AMPS:	118	TOWER FAN HP:	5
CHILLER PH:	3		
CHILLER CAP (TONS):	65		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 3 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**PROJECT NAME:** EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:** DACA 01-94-D-0033  
**LOCATION:** FT. RILEY, KS

DATE: 10/18/94

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NAME: DRUG ABUSE CTR

CONDITIONED SQFT: 11,122

**SUSPECT ACM:** N

**BUILDING SCHEDULE NO:** 64

REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253

AHU NUMBER: AHU-1

AHU LOCATION: 103

REFRIG SYS # SRVNG AHU:

SERVES AREA:

% OF BLDG AREA HEATED:

10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,350

CFM-CLG: 1,350

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNATIONAL ENV. CORP.

UNIT MODEL: 12HB4

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 56

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253

AHU NUMBER: AHU-2

AHU LOCATION: 110

REFRIG SYS # SRVNG AHU:

SERVES AREA:

% OF BLDG AREA HEATED: 21

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,060

CFM-CLG: 3,060

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNAT'L ENV. CORP.

UNIT MODEL: 30HB4

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: WESTINGHOUSE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: K-56

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253  
AHU NUMBER: AHU-3 AHU LOCATION: 115  
REFRIG SYS # SRVNG AHU: SERVES AREA:  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,505 CFM-CLG: 2,505  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNAT'L ENV. CORP. UNIT MODEL: 20HB4  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 56-70 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: DUAL SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253  
AHU NUMBER: AHU-4 AHU LOCATION: 121  
REFRIG SYS # SRVNG AHU: SERVES AREA:  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,920 CFM-CLG: 1,920  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNAT'L ENV. CORP. UNIT MODEL: 20HB4  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 56-70 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: DUAL SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253

AHU NUMBER: AHU-5

AHU LOCATION: 118

REFRIG SYS # SRVNG AHU:

SERVES AREA:

% OF BLDG AREA HEATED:

9

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,630

CFM-CLG: 2,630

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNAT'L ENV. CORP.

UNIT MODEL: 30 HBU

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: WESTINGHOUSE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: K-56

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253

AHU NUMBER: AHU-6

AHU LOCATION: 120

REFRIG SYS # SRVNG AHU:

SERVES AREA:

% OF BLDG AREA HEATED:

21

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,705

MIN %OA: 15

CFM-CLG: 1,705

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNAT'L

UNIT MODEL: 16HB4

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: WESTINGHOUSE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: D-56

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253  
AHU NUMBER: AHU-7 AHU LOCATION: 122  
REFRIG SYS # SRVNG AHU: SERVES AREA:  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,945 CFM-CLG: 2,945  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: INTERNAT'L ENV. CORP UNIT MODEL: 30 HB4  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: WESTINGHOUSE RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: DUAL SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLs? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0253

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL9240GWFB

BLR CAP OUTPUT (BTUH): 770,000

BLR CAP INPUT (BTUH): 963,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 64

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AMS/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0253

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: AHUS 1-7

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 64

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

0 DEG F or PSIG

#### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 1.5

PUMP MFG: ARMSTRONG

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 2D4380BF

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0253

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: AHU'S 1-7

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

0

BLR CAP INPUT (BTUH):

0

**SCHEDULE**

DAYS SCHEDULE NO:

64

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

RESET CONTROLS:

N

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP:

1.5

PUMP MFG: ARMSTRONG

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 2D4380BF

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AMS/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0253 BLDG NAME: DRUG ABUSE CTR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	BOHN	TOWER MFG:	
CHILLER MODEL:	CC40DT	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	28
CHILLER AMPS:	62.8	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	32		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 64 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0301 BLDG NAME: FINANCE ADMIN

ELECTRIC METER: N

CONDITIONED SQFT: 32,947

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 49

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0301

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 3

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000

CFM-CLG: 2,000

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB21D906

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: SVN254TTDR5028

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	HW	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 49

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0301

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,500

CFM-CLG: 10,500

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB25EB06

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	HW	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 49

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0301

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-3

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,890

CFM-CLG: 12,890

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: BDP

UNIT MODEL: 517A120

SUPPLY FAN HP: 15

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	HW	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 49

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0301

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



##### ☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (<15#)

FUEL TYPE:



##### ☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

65

BOILER MFG: PEERLESS

UNIT MODEL: 6-710FDA

BLR CAP OUTPUT (BTUH):

919,700

BLR CAP INPUT (BTUH):

1,226,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO:

49

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0301

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: \_\_\_\_\_



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

919,700

BLR CAP INPUT (BTUH): \_\_\_\_\_

919,700

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 49

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: TVC145TTDR5331AA

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0301 BLDG NAME: FINANCE ADMIN  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION:  
SOURCE OF HEATING: BLR-1 SERVES AREA: ALL  
RADIATION UNIT TYPE: HW % AREA HTG: 65

### RADIATION PUMP

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: MARATHON  
PUMP MODEL: TVC145TTDR5331AA

### SCHEDULE

DAYS SCHEDULE NO: 49 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:  
RADIATION CONTROL: NONE  
OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0  
RESET CONTROL: N  
CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0301 BLDG NAME: FINANCE ADMIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): N. EXTERIOR OF BLDG  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	TRANE
CHILLER MODEL:	RAUBC256BE00B	# OF TOWER FANS:	3
CHILLER SERIAL NO:	J87C80765	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	4.1
CHILLER AMPS:	91.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	25		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 49 MONTHS SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0301 BLDG NAME: FINANCE ADMIN  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): E. EXTERIOR OF BLDG  
AHU'S SERVED: AHU-2  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	TRANE
CHILLER MODEL:	RAUBC306BE00B	# OF TOWER FANS:	3
CHILLER SERIAL NO:	J87C80766	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	4.1
CHILLER AMPS:	109	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	30		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 49 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0301 BLDG NAME: FINANCE ADMIN  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): E. EXTERIOR OF BLDG  
AHU'S SERVED: AHU-3  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	BRYANT	TOWER MFG:	
CHILLER MODEL:	566DPX120000AAAA	# OF TOWER FANS:	2
CHILLER SERIAL NO:	3992F19413	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	4.3
CHILLER AMPS:	43.6	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	10		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 49 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	7	7	7	7	7	8
REQ STOP:	12	16	16	16	16	16	12

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐  
PRESS LITE LOW: ☐  
PRESS GAUGES: ☐

TEMP LITE HI: ☐  
TEMP LITE LOW: ☐  
TEMP GAUGES: ☐

OTHER INDICATORS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0302 BLDG NAME: FINANCE ADMIN  
ELECTRIC METER: N CONDITIONED SQFT: 16,138  
GAS METER: N  
SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

### REMARKS:

Bldg. Contact: Joyce Murrell @ Ext. 6452

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0302

AHU NUMBER: AHU-1

AHU LOCATION: mer

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 83

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,000

CFM-CLG: 12,000

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDB17F90G

SUPPLY FAN HP: 15

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	HOT WATER	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 68

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0302

AHU NUMBER: AHU-2

AHU LOCATION: NE CORNER OF BLDG

REFRIG SYS # SRVNG AHU: ACCU-1

SERVES AREA: OFFICE/STORAGE

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 450

MIN %OA: 0

CFM-CLG: 450

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	ELECTRIC	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0302

AHU NUMBER: UH-1-4

AHU LOCATION: ATTIC STORAGE AREA

REFRIG SYS # SRVNG AHU: N/A

SERVES AREA: ATTIC STORAG/SUPPLY AREA

% OF BLDG AREA HEATED: 15

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 1

CFM-HTG: 2,520

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: MCQUAY

UNIT MODEL: UDH-040B

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0302

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX

UNIT MODEL: V554744

BLR CAP OUTPUT (BTUH): 600,000

BLR CAP INPUT (BTUH): 750,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

150 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: ☒

### HW PUMP

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: B & G

PUMP SERVICE: HW PUMP (STAND BY)

PUMP MODEL: M98558

### HW PUMP

PUMP TAG: 2

PUMP HP: 0

PUMP MFG: 1.5 HP - B & G

PUMP SERVICE: HW PUMP (STANDBY)

PUMP MODEL: M98558

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0302 BLDG NAME: FINANCE ADMIN  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): EXTERIOR OF BLDG.  
AHU'S SERVED: AHU-2  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	LIEBERT	TOWER MFG:	
CHILLER MODEL:	3024968	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.25
CHILLER PH:	0		
CHILLER CAP (TONS):	3		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0302 BLDG NAME: FINANCE ADMIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): S. EXTERIOR OF BLDG.  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	TRANE
CHILLER MODEL:	RAUBC265BE00B	# OF TOWER FANS:	3
CHILLER SERIAL NO:	J87C80764	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	4.1
CHILLER AMPS:	91.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	25		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

BLDG. CONTACT: KAREN WEBB @ EXT. 2535

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0313

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500

CFM-CLG: 4,500

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: MODINE

UNIT MODEL: DJ3005

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: DUCT FURNANCE: INPUT =300,000 BTUH; OUTPUT: 240,000 BTUH

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 74

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 74

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0313 BLDG NAME: CIV PERS BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): S. EXT. OF BLDG  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	BRYANT	TOWER MFG:	
CHILLER MODEL:	566CPX135000AAAA	# OF TOWER FANS:	2
CHILLER SERIAL NO:	4382G9855	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	3.6
CHILLER AMPS:	46	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	13.5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATORS:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0319

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 60

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,500

CFM-CLG: 14,500

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 50BA 408 084

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: HOT WATER

☒

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: DX

☐**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 45

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE:  
PREPARED BY:

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0319

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



☐ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

40

BOILER MFG: AJAX

UNIT MODEL: WG-675-S

BLR CAP OUTPUT (BTUH):

540,000

BLR CAP INPUT (BTUH):

675,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: GENERAL ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 0319 BLDG NAME: GEN INSTR BLDG  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: MER  
SOURCE OF HEATING: BLR-1 SERVES AREA: ALL  
RADIATION UNIT TYPE: HW % AREA HTG: 40

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: GENERAL ELECTRIC  
PUMP MODEL:

**RADIATION PUMP**

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP MODEL:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0319

BLDG NAME: GEN INSTR BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG: CARLYLE COMP. CO.  
CHILLER MODEL: 8240AC1200  
CHILLER SERIAL NO: 2488J00888  
CHILLER V: 208  
CHILLER AMPS: 0  
CHILLER PH: 3  
CHILLER CAP (TONS): 25

TOWER MFG: CARRIER  
# OF TOWER FANS: 3  
TOWER FAN V: 208  
TOWER FAN AMPS: 6.6  
TOWER FAN HP: 1.75

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/DJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0330

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT CENTRAL

REFRIG SYS # SRVNG AHU: CH-6

SERVES AREA: 1ST FLR &amp; BSMT

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,500

CFM-CLG: 2,500

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: ARCO AIR

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 72

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 78

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 78

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0330  
AHU NUMBER: AHU-2  
REFRIG SYS # SRVNG AHU: CH-5  
AHU LOCATION: E. BASEMENT  
SERVES AREA: 1ST FLR & BSMT  
% OF BLDG AREA HEATED: 22

AHU UNIT TYPE: SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,000  
MIN %OA: 0  
CFM-CLG: 3,000  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: SNYDER GENERAL  
SUPPLY FAN HP: 1.5  
SUPPLY FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
COMMENTS: GAS-FIRED FURNACE  
UNIT MODEL: GUF200A032-IN  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SETBACK  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0330  
AHU NUMBER: AHU-3 AHU LOCATION: ATTIC  
REFRIG SYS # SRVNG AHU: CH-2 SERVES AREA: 2ND FLR S.E.  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,950 CFM-CLG: 2,950  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: SNYDER GENERAL UNIT MODEL: H804084  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 76 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 78 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0330  
AHU NUMBER: AHU-4  
AHU LOCATION: ATTIC  
REFRIG SYS # SRVNG AHU: CH-3  
SERVES AREA: 2N FLR N.W.  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,950  
MIN %OA: 0

CFM-CLG: 2,950  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: SNYDER GENERAL  
UNIT MODEL: H804084  
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 76  
PRESENT TEMP SUM UNOCC: 78  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0330

AHU NUMBER: AHU-5

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-4

SERVES AREA: COMPUTER ROOM

% OF BLDG AREA HEATED: 3

AHU UNIT TYPE OTHER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 875

MIN %OA: 0

CFM-CLG: 875

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: HIROSS

UNIT MODEL: SPACE MAKER III

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	ELECTRIC	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/DJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0330

AHU NUMBER: AHU-6

AHU LOCATION: BSMT WEST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLR &amp; BSMT

% OF BLDG AREA HEATED: 22

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,000

CFM-CLG: 3,000

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: SNYDER GENERAL

UNIT MODEL: GUF200A032-IN

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0330 BLDG NAME: DEH ADMIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): S. EXT OF BLDG  
AHU'S SERVED: BSMT FURN NO. 2  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	2.9	TOWER FAN HP:	0.33
CHILLER PH:	1		
CHILLER CAP (TONS):	2		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0330 BLDG NAME: DEH ADMIN  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): EAST EXT. MEZZ  
AHU'S SERVED: 2 AHU'S IN ATTIC  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

## NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	2.9	TOWER FAN HP:	0.33
CHILLER PH:	1		
CHILLER CAP (TONS):	2		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: N

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: N

OTHER INDICATORS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0330

BLDG NAME: DEH ADMIN

REF. UNIT NUMBER/TAG: CH-3

LOCATION (MER#): EAST EXT. MEZZ

AHU'S SERVED: 2 AHU'S IN ATTIC

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:   
CHILLER MODEL:   
CHILLER SERIAL NO:   
CHILLER V:  230  
CHILLER AMPS:  29  
CHILLER PH:  1  
CHILLER CAP (TONS):  2

TOWER MFG:   
# OF TOWER FANS:  1  
TOWER FAN V:  0  
TOWER FAN AMPS:  0  
TOWER FAN HP:  0.33

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:  0

CNWS SETPOINT:  0

CWR SETPOINT:  0

CNWR SETPOINT:  0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0330 BLDG NAME: DEH ADMIN  
REF. UNIT NUMBER/TAG: CH-4 LOCATION (MER#): WEST EXT. OF BLDG  
AHU'S SERVED: CENTRAL BSMT AHU  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	LARKIN	TOWER MFG:	
CHILLER MODEL:	FCA 8 SM	# OF TOWER FANS:	1
CHILLER SERIAL NO:	8435504100	TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	3.9	TOWER FAN HP:	0.33
CHILLER PH:	1		
CHILLER CAP (TONS):	3		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0330 BLDG NAME: DEH ADMIN  
REF. UNIT NUMBER/TAG: CH-5 LOCATION (MER#): N.E. EXT. OF BLDG.  
AHU'S SERVED: BSMT FURN. NO 1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	
CHILLER V:	230	TOWER FAN AMPS:	
CHILLER AMPS:	2.3	TOWER FAN HP:	0.167
CHILLER PH:	1		
CHILLER CAP (TONS):	2		

COMMENTS: NAME DELUXE HIGH EFFICIENCY AIR CONDITIONER

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DJ

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0330 BLDG NAME: DEH ADMIN  
REF. UNIT NUMBER/TAG: CH-6 LOCATION (MER#): N.E. EXT. OF BLDG.  
AHU'S SERVED: BSMT FURN NO 1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	
CHILLER V:	230	TOWER FAN AMPS:	
CHILLER AMPS:	2.3	TOWER FAN HP:	0.167
CHILLER PH:	1		
CHILLER CAP (TONS):	2		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0364

AHU NUMBER: AHU-1

AHU LOCATION: KITCHEN

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE RESIDENTIAL FURNACE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 950

CFM-CLG: 950

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: ARCOAIRE

UNIT MODEL: GUF100NDA

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 22

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	15	15	15	15	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 71

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 71

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

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CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0364

BLDG NAME: UEMCS HQ

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG: ARCOAIRE  
CHILLER MODEL: OUTSIDE  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 3

TOWER MFG: ARCOAIRE  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.25

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 22

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	15	15	15	15	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0402

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 35,718

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0402

AHU NUMBER: AHU-1

AHU LOCATION: 2ND FLR MER WEST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND WEST

% OF BLDG AREA HEATED: 40

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 9,325

CFM-CLG: 9,325

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: N/A

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BVD213TTDR7359

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 90

HOT DECK DEG F: 90

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 61

MIXED AIR DEG F: 61

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0402  
AHU NUMBER: AHU-2 AHU LOCATION: 2ND FLR MER W&E  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 1ST & 2ND EAST  
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 11,800 CFM-CLG: 11,800  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: N/A UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 90 HOT DECK DEG F: 90  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 61 MIXED AIR DEG F: 61  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0402

AHU NUMBER: AHU-3

AHU LOCATION: BASEMENT MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BASEMENT NORTH

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,300

CFM-CLG: 1,300

MIN %OA: 25

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

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CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0402

BOILER RM LOCATION: BASEMENT

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: MED PRESS STEAM (15# TO 125#) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
--	--

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

BLR CAP OUTPUT (BTUH): 2,102,000

UNIT MODEL: EL60GPF

BLR CAP INPUT (BTUH): 2,627,500

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

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LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0402 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,3  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

### NAMEPLATE

CHILLER MFG:	BOHN	TOWER MFG:	
CHILLER MODEL:	ACWC47D	# OF TOWER FANS:	2
CHILLER SERIAL NO:	BCH8160	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	100
CHILLER AMPS:	100	TOWER FAN HP:	5
CHILLER PH:	0		
CHILLER CAP (TONS):	65		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: CWWAJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: CWWAJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0403	AHU LOCATION:	BSMT. AND 1ST FLR
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	BASMT. AND 1ST FLR.
		% OF BLDG AREA HEATED:	50
AHU UNIT TYPE	HEAT PUMP	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	8,700	CFM-CLG:	8,700
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	3.7	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	1	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR: \_\_\_\_\_  
CONTROLS COMMENTS: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: CWWAJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0403	AHU LOCATION:	2ND AND ATTIC
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	2ND AND ATTIC
		% OF BLDG AREA HEATED:	50
AHU UNIT TYPE	HEAT PUMP	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	12,950	CFM-CLG:	12,950
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	1	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR: \_\_\_\_\_  
CONTROLS COMMENTS: \_\_\_\_\_

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: CWWAJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0403

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐

☒ BOILER

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 5

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL:

#### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: CWWAJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0403

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: HWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

1

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 5

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: CWWAJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0403

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

☐

☒ BOILER

BOILER TAG: HWP-3

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 3

PUMP HP: 10

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL:

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: CWWAJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0403

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☐☐ **BOILER**

BOILER TAG: HWP-4

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

1

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 4

PUMP HP:

10

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AMS/JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AMS/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0404

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLRS - N.W.

% OF BLDG AREA HEATED: 43

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,570

CFM-CLG: 8,570

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 15

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EVE143TTDR7350

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AMS/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0404	AHU LOCATION:	MER
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	1ST 2ND FLRS S.E.
		% OF BLDG AREA HEATED:	35
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	7,070	CFM-CLG:	7,070
MIN %OA:	15	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	15	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	TOSHIBA	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	B0154FLF2US01	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input checked="" type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	Y	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AMS/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0404

AHU NUMBER: AHU-3

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: BASEMENT- N.W.

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000

CFM-CLG: 2,000

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AMS/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0404  
AHU NUMBER: AHU-4 AHU LOCATION: 1ST FLLOR MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 2ND FLOOR S.E.  
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,360  
MIN %OA: 10

CFM-CLG: 2,360  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AMS/JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0404

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE:



☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



☐ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

15

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-92-40-G-WEB

BLR CAP OUTPUT (BTUH):

770,000

BLR CAP INPUT (BTUH):

963,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 7 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AMS/JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0404	BLDG NAME:	ENL BARRACKS W/DAS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:	STEAM	SERVES AREA:	HALLWAYS AND STAIRS
RADIATION UNIT TYPE:	STEAM	% AREA HTG:	15

### SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC
RADIATION CONTROL:	2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB
OCC HT SPACE SP:	72
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AMS/JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0404 BLDG NAME: ENL BARRACKS W/DAS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): EXTERIOR  
AHU'S SERVED: AHU-1,3,4  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

### NAMEPLATE

CHILLER MFG:	BOHN	TOWER MFG:	
CHILLER MODEL:	ACWC47D	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	100	TOWER FAN HP:	5
CHILLER PH:	3		
CHILLER CAP (TONS):	45		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	N	TEMP LITE HI:	N
PRESS LITE LOW:	N	TEMP LITE LOW:	N
PRESS GAUGES:	Y	TEMP GAUGES:	Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 3 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AMS/JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0404 BLDG NAME: ENL BARRACKS W/DAS  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	20		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: JM/AJN/AMS

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0405

BLDG NAME: ADMIN GEN PURP

ELECTRIC METER: N

CONDITIONED SQFT: 10,778

GAS METER: N

SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0405

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 65

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000

CFM-CLG: 4,000

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MAJIC AISE

UNIT MODEL: VWBC-10

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRL? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0405  
AHU NUMBER: FC-1 AHU LOCATION: 1ST & 2ND FLOORS  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 1ST & 2ND FLOORS  
% OF BLDG AREA HEATED: 19

AHU UNIT TYPE FAN COILS - 2 PIPE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,200 CFM-CLG: 3,200  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.33 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0405

AHU NUMBER: FC-2

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BSMT.

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0405

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: THERMO PAK

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 800,000

BLR CAP INPUT (BTUH): 960,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0405

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: BALDOR

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: JMM3157T

### HW PUMP

PUMP TAG: 2

PUMP HP: 2

PUMP MFG: BALDOR (STANDBY)

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: JMM3157T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0405

BLDG NAME: ADMIN GEN PURP

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): PAD MTD - OUTSIDE

AHU'S SERVED: ALL

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TECH. SYST. RAE CORP.  
CHILLER MODEL: 20A0CD60  
CHILLER SERIAL NO: 6-61-A23064  
CHILLER V: 208  
CHILLER AMPS: 118  
CHILLER PH: 0  
CHILLER CAP (TONS): 58

TOWER MFG:  
# OF TOWER FANS: 6  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0406 BLDG NAME: CID BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 10,390

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0406

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 9

CFM-HTG: 6,130

CFM-CLG: 6,130

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 39EB11

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE ☐HEATING COIL: STEAM ☒REHEAT COIL: NONE ☐HUMIDIFIER: NONE ☒COOLING COIL: DX ☒**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0406

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: M-55-KX

BLR CAP OUTPUT (BTUH): 550,000

BLR CAP INPUT (BTUH): 688,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC/DDC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0406 BLDG NAME: CID BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AD024520	# OF TOWER FANS:	3
CHILLER SERIAL NO:	N598135	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	76	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	20		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/DDC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0409

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 32,883

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0409

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BASEMENT REC AREA

% OF BLDG AREA HEATED: 11

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 1,950

MIN %OA: 14

CFM-CLG: 1,950

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: E143TTDR7350AK

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 55

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0409

AHU NUMBER: AHU-2

AHU LOCATION: 1ST FLOOR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FOOR S.E. WING

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 3,565

CFM-CLG: 3,565

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: DN145TTDR7927A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0409  
AHU NUMBER: AHU-3 AHU LOCATION: MER 2ND FLOOR  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 1ST AND 2ND FLOOR N.W. WIN  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 4

CFM-HTG: 6,115  
MIN %OA: 14

CFM-CLG: 6,115  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: SUPPLY FAN HP: 3 UNIT MODEL: RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: EC182TTDR7627A RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 65 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 55  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0409

AHU NUMBER: AHU-4

AHU LOCATION: MER 2ND FLOOR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: N.E. WING 1ST AND 2ND FLOOR

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 8

CFM-HTG: 15,075

CFM-CLG: 15,075

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EBD213TTDR7359

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: EP

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 55

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0409

AHU NUMBER: UH-1

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU:

SERVES AREA: BSMENT N.W. WING

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,260

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.17

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0409

AHU NUMBER: UH-2

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU:

SERVES AREA: BASEMENT

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,270

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0409

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b>	<input type="checkbox"/> <b>CONVERTER</b>
BOILER TAG: BLR-1	CONVERTER TAG:
BOILER TYPE: MED PRESS STEAM (15# TO 125#)	CONVERTER TYPE:
FUEL TYPE: NAT. GAS	CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 25

BOILER MFG: BURNHAM  
UNIT MODEL: 4FL20940LB

BLR CAP OUTPUT (BTUH): 1,749,000  
BLR CAP INPUT (BTUH): 2,186,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 7.5 DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0409	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES & LATRINES
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	STEAM	% AREA HTG:	25

### SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC	
RADIATION CONTROL:	2-WAY VALVE	
OCC HT SPACE SP:	0	
UNOCC HT SPACE SP:	0	RESET CONTROL: <input checked="" type="checkbox"/>
CONTROL COMMENTS:		

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0409

BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1,2,3,4

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: TSI

TOWER MFG:

CHILLER MODEL: SE2CD70

# OF TOWER FANS: 6

CHILLER SERIAL NO:

TOWER FAN V: 208

CHILLER V:

TOWER FAN AMPS: 48

CHILLER AMPS: 135

TOWER FAN HP: 1

CHILLER PH: 0

CHILLER CAP (TONS): 73.8

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATORS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG: BALDOR

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: M3211T

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0410

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 32,883

GAS METER: N

SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0410

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BSMT REC AREA

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 1,950

CFM-CLG: 1,950

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: N/A

UNIT MODEL: N/A

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: E143TTDR7350AK

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 55

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0410

AHU NUMBER: AHU-2

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLR S.E. WING

% OF BLDG AREA HEATED: 29

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 12,375

CFM-CLG: 12,375

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: N/A

UNIT MODEL: N/A

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0410

AHU NUMBER: AHU-3

AHU LOCATION: MER 2ND FLR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND FLOR N.W. WING

% OF BLDG AREA HEATED: 29

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 4

CFM-HTG: 12,375

CFM-CLG: 12,375

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: N/A

UNIT MODEL: N/A

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 65

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0410	AHU LOCATION:	BASEMENT
AHU NUMBER:	UH-1		
REFRIG SYS # SRVNG AHU:	N/A	SERVES AREA:	BSMT N.W. WING
		% OF BLDG AREA HEATED:	8
AHU UNIT TYPE	UNIT HEATER	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,260	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	N/A	UNIT MODEL:	N/A
SUPPLY FAN HP:	0.16	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	N
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0410

AHU NUMBER: UH-2

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU:

SERVES AREA: BSMT. S.E. WING

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,270

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: N/A

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE ☐HEATING COIL: STEAM ☒REHEAT COIL: NONE ☐HUMIDIFIER: NONE ☐COOLING COIL: NONE ☐**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0410

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ BOILER

BOILER TAG: BLR-1  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

☐

CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: BURHAM  
UNIT MODEL: 4FL20940LB

BLR CAP OUTPUT (BTUH): 1,749,000  
BLR CAP INPUT (BTUH): 2,186,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0410	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:	BOILER	SERVES AREA:	HALLWAYS/STAIRS
RADIATION UNIT TYPE:	STEAM	% AREA HTG:	20

### SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC	
RADIATION CONTROL:	2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB	
OCC HT SPACE SP:	65	
UNOCC HT SPACE SP:	0	RESET CONTROL: <input checked="" type="checkbox"/> N
CONTROL COMMENTS:		

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0410 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1, 2, & 3  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	SE2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	48
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: BALDOR  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: M3211T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0411

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 32,883

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0411

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BSMT REC AREA

% OF BLDG AREA HEATED: 11

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 1,950

MIN %OA: 14

CFM-CLG: 1,950

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: E143TDR7350AK

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 55

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0411

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST FLR SE WING

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 3,565

CFM-CLG: 3,565

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: DN145TTDR7927A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRL? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0411

AHU NUMBER: AHU-3

AHU LOCATION: MER-2ND FLR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1ST AND 2ND FLR NW WING

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 4

CFM-HTG: 6,115

MIN %OA: 14

CFM-CLG: 6,115

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EC182TTDR7627A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 65

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 55

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0411

AHU NUMBER: AHU-4

AHU LOCATION: MER 2ND FLR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: NE WING 1ST &amp; 2ND FLR

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 8

CFM-HTG: 15,075

CFM-CLG: 15,075

MIN %OA: 14

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EBD213TTDR7359

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 55

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0411

AHU NUMBER: UH-1

AHU LOCATION: BSMT

REFRIG SYS # SRVNG AHU: N/A

SERVES AREA: BSMT NW. WING

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UH

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,260

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.17

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0411

AHU NUMBER: UH-2

AHU LOCATION: BSMT

REFRIG SYS # SRVNG AHU:

SERVES AREA: BSMT SE WING

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,270

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0411

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL20940LB

BLR CAP OUTPUT (BTUH): 1,749,000

BLR CAP INPUT (BTUH): 2,186,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0411

BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1-4

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SE2CD70  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 135  
CHILLER PH: 0  
CHILLER CAP (TONS): 73.8

TOWER MFG:  
# OF TOWER FANS: 6  
TOWER FAN V: 208  
TOWER FAN AMPS: 4.8  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG:

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0500

BLDG NAME: POST HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 65,453

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0500

AHU NUMBER: HP-1

AHU LOCATION: BSMT SOUTH

REFRIG SYS # SRVNG AHU:

SERVES AREA: BSMT SOUTH

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,960

CFM-CLG: 6,960

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0500  
AHU NUMBER: HP-2  
AHU LOCATION: BSMT NORHT  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: BSMNT NORTH  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE: HEAT PUMP  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300  
MIN %OA: 0  
CFM-CLG: 8,300  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	0500	AHU LOCATION:	1ST FLR SOUTH
AHU NUMBER:	HP-3		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	1ST FLR SOUTH
		% OF BLDG AREA HEATED:	15
AHU UNIT TYPE	HEAT PUMP	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	8,440	CFM-CLG:	8,440
MIN %OA:	0	MAX %OA:	0

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	3	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	2	MONTH SCHEDULE NO:	3
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0500	AHU LOCATION:	1ST FLR NORTH
AHU NUMBER:	HP-4		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	1ST FLR NORTH
		% OF BLDG AREA HEATED:	18
AHU UNIT TYPE	HEAT PUMP	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	13,760	CFM-CLG:	13,760
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	2	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0500

AHU NUMBER: HP-5

AHU LOCATION: 2ND FLR

REFRIG SYS # SRVNG AHU:

SERVES AREA: 2ND FLR

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 15,480

MIN %OA: 0

CFM-CLG: 15,480

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0500

AHU NUMBER: HP-6

AHU LOCATION: 3RD FLR

REFRIG SYS # SRVNG AHU:

SERVES AREA: 3RD FLR

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,750

CFM-CLG: 9,750

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0500

BOILER RM LOCATION: MER BASEMENT

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX

UNIT MODEL: SGXFD-4250

BLR CAP OUTPUT (BTUH): 3,400,000

BLR CAP INPUT (BTUH): 4,250,000

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: 1 PUMP HP: 40

PUMP MFG: BALDOR

PUMP SERVICE: CONDENSER WATER PUMP

PUMP MODEL: M2539T

**HW PUMP**

PUMP TAG: 2 PUMP HP: 40

PUMP MFG: BALDOR

PUMP SERVICE: CONDENSER WATER PUMP

PUMP MODEL: M2539T

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0500 BLDG NAME: POST HQ BLDG  
REF. UNIT NUMBER/TAG: CT-1 LOCATION (MER#):  
AHU'S SERVED: ALL HEAT PUMPS  
UNIT TYPE: OTHER

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	BALTIMORE
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	30
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	GE
PUMP SERVICE:	COOLING TOWER			PUMP MODEL:	5K182JX27A

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0500 BLDG NAME: POST HQ BLDG  
REF. UNIT NUMBER/TAG: CT-2 LOCATION (MER#): MER  
AHU'S SERVED: ALL HEAT PUMPS  
UNIT TYPE: OTHER

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	BALTIMORE
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	30
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N  
CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: GE  
PUMP SERVICE: COOLING TOWER PUMP MODEL: 5K182JX27A



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0509

BLDG NAME: ADMIN GEN PURPOSE

ELECTRIC METER: Y

CONDITIONED SQFT: 10,108

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0509

AHU NUMBER: HP-1

AHU LOCATION: ZONE PERIMETER

REFRIG SYS # SRVNG AHU:

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE HEAT PUMP

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,440

CFM-CLG: 8,440

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0512

BLDG NAME: SR ENL QTRS

ELECTRIC METER: N

CONDITIONED SQFT: 13,619

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0512  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: DINING ROOM  
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250 CFM-CLG: 1,250  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MCQUAY UNIT MODEL:  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: TOSHIBA RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 80034FGF2A4 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 58  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0512

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL15440GWEB

BLR CAP OUTPUT (BTUH): 1,289,000

BLR CAP INPUT (BTUH): 1,611,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.33

PUMP MFG: COND. PUMP

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0512

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL15440GWEB

BLR CAP OUTPUT (BTUH): 1,289,000

BLR CAP INPUT (BTUH): 1,289,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: HW PUMP

PUMP MODEL: 8-350322-01

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0512 BLDG NAME: SR ENL QTRS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	INTER-CITY PRODUCTS	TOWER MFG:	
CHILLER MODEL:	C100G0	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	66
CHILLER AMPS:	36.1	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	10		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0512

BLDG NAME: SR ENL QTRS

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: FAN COIL UNIT

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: 30A OCD45  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 74  
CHILLER PH: 0  
CHILLER CAP (TONS): 30

TOWER MFG:  
# OF TOWER FANS: 4  
TOWER FAN V: 0  
TOWER FAN AMPS: 4.6  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:

☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: Y

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CW-1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: H122



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540

BOILER RM LOCATION: MER

#### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: PGX-2006AWN1

BLR CAP OUTPUT (BTUH): 828,000

BLR CAP INPUT (BTUH): 984,000

COMMENTS: TOTAL FOR 6 MODULAR BOILERS

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 0.25

PUMP MFG: TACO

PUMP SERVICE: HW PUMP

PUMP MODEL: 007-F4

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0540

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: PGX-2006AWN1

BLR CAP OUTPUT (BTUH): 276,000

BLR CAP INPUT (BTUH): 328,000

COMMENTS: TOTAL FOR 2 MODULAR BOILERS

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.08

PUMP MFG: TACO

PUMP SERVICE: HW PUMP

PUMP MODEL: 007-F4

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0540

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0540 BLDG NAME: OFF QTRS MILIT  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FAN COIL UNITS  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AE-044-510	# OF TOWER FANS:	4
CHILLER SERIAL NO:	2190F18047	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	76	TOWER FAN HP:	0.43
CHILLER PH:	3		
CHILLER CAP (TONS):	40		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0541

BLDG NAME: OFF QTRS MILIT

ELECTRIC METER: ☒ Y

CONDITIONED SQFT: 18,083

GAS METER: ☒ YSUSPECT ACM: ☐ N**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0541

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: PGX-2006AWN1

BLR CAP OUTPUT (BTUH): 828,000

BLR CAP INPUT (BTUH): 984,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.25

PUMP MFG: TACO

PUMP SERVICE: HW PUMP

PUMP MODEL: 077-F4



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0541

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: BURNHAM

UNIT MODEL: PGX-2006AWNI

BLR CAP OUTPUT (BTUH):

276,000

BLR CAP INPUT (BTUH):

328,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.08

PUMP MFG: TACO

PUMP SERVICE: HW PUMP

PUMP MODEL: 007-F4

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0541

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:** ALL☒ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:   
UNIT MODEL:   
COMMENTS:   
BLR CAP OUTPUT (BTUH): 0  
BLR CAP INPUT (BTUH): 0**SCHEDULE**DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:   

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:   
CONTROLS COMMENTS:   

RESET CONTROLS: N

**HW PUMP**PUMP TAG: DTWP-1 PUMP HP: 2 PUMP MFG: MARATHON  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL:   
**HW PUMP**PUMP TAG:   
PUMP HP:   
PUMP MFG:   
PUMP SERVICE:   
PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0541

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0541

BLDG NAME: OFF QTRS MILIT

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: FC'S

UNIT TYPE RECIPROCATING W/AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG: CARRIER  
CHILLER MODEL: 38AE-044-510  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 152  
CHILLER PH: 3  
CHILLER CAP (TONS): 40

TOWER MFG:  
# OF TOWER FANS: 4  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.43

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0542

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: PGX-2006AWN1

BLR CAP OUTPUT (BTUH): 828,000

BLR CAP INPUT (BTUH): 984,000

COMMENTS: TOTAL FOR 6 MODULAR BOILERS

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 0.25

PUMP MFG: TACO

PUMP SERVICE: HW PUMP

PUMP MODEL: 007-F4

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0542

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☐

☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: PGX-2006AWNI

BLR CAP OUTPUT (BTUH): 276,000

BLR CAP INPUT (BTUH): 328,000

COMMENTS: TOTAL FOR 2 MODULAR BOILERS

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 0.08

PUMP MFG: TACO

PUMP SERVICE: HW PUMP

PUMP MODEL: 007-F4

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0542

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0542

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0542 BLDG NAME: OFF QTRS MILIT  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FAN COILS  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AE-044-510	# OF TOWER FANS:	4
CHILLER SERIAL NO:	2190F18047	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	76	TOWER FAN HP:	0.43
CHILLER PH:	3		
CHILLER CAP (TONS):	40		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0602

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 80

AHU UNIT TYPE DUAL DUCT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,900

CFM-CLG: 13,900

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: H-25-B

SUPPLY FAN HP: 25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GOULD

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	STEAM	<input checked="" type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

Time Clock: 5am-8pm M-W; 5am-9pm Th-F; off Sat &amp; Sun

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0602

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



#### CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: IBR  
UNIT MODEL: PF506

BLR CAP OUTPUT (BTUH): 506,000  
BLR CAP INPUT (BTUH): 607,200

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 9

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0602

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: BELL AND GOSSETT

UNIT MODEL: SU-64-4

BLR CAP OUTPUT (BTUH): 500,000

BLR CAP INPUT (BTUH): 500,000

COMMENTS: Year Built: 1979

**SCHEDULE**

DAYS SCHEDULE NO: 9

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.25

PUMP MFG: BELL AND GOSSETT

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	0602	BLDG NAME:	DENTAL CLINIC
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:	BLR-1	SERVES AREA:	PERIMETER ROOMS
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.25	PUMP MFG:	
				PUMP MODEL:	

**SCHEDULE**

DAYS SCHEDULE NO:	9	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	9	9	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	ELECTRIC	
RADIATION CONTROL:		
OCC HT SPACE SP:	0	
UNOCC HT SPACE SP:	0	
RESET CONTROL:	<input checked="" type="checkbox"/> N	
CONTROL COMMENTS:		

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0602 BLDG NAME: DENTAL CLINIC  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): EXTERIOR BLDG.  
AHU'S SERVED: AHU-1  
UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	CA2CD75	# OF TOWER FANS:	6
CHILLER SERIAL NO:	4-87-12225	TOWER FAN V:	208
CHILLER V:	460	TOWER FAN AMPS:	4.5
CHILLER AMPS:	67.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	78.2		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 9 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 52 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATORS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: BALDOR  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: M3558T



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY:

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0610

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 29,004

GAS METER: N

SUSPECT ACM: Y

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0610

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☐☐ **BOILER**

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

630,000

BLR CAP INPUT (BTUH):

630,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

RESET CONTROLS:

N

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG:

1

PUMP HP:

1.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0610

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 10

PUMP MFG: TACO

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: FM3008

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0610

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 10

PUMP MFG: TACO

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: FM3008

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0610 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FAN COILS  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	MCQUAY	TOWER MFG:	
CHILLER MODEL:	CDE-14100-1	# OF TOWER FANS:	12
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	533	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	116		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 5 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/95  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0620 BLDG NAME: OFF QTRS MILIT  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: Y  
CONDITIONED SQFT: 12,640

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

SUSPECT ACM LOCATED ON PIPE FITTINGS AND HW STORAGE TANK

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/95  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0620

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="checkbox"/> <b>BOILER</b> BOILER TAG: _____ BOILER TYPE: _____ FUEL TYPE: _____	<input checked="" type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CV-1 CONVERTER TYPE: STM TO HW CONV HT SOURCE: HW FROM CENTRAL PLANT
<input checked="" type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: \_\_\_\_\_ BLR CAP OUTPUT (BTUH): 398,800  
UNIT MODEL: \_\_\_\_\_ BLR CAP INPUT (BTUH): 398,800  
COMMENTS: \_\_\_\_\_

**SCHEDULE**DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 135 DEG F or PSIG  
TYPE OF BURNER CONTROLS: \_\_\_\_\_  
RESET CONTROLS: N  
CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: HP-1 PUMP HP: 2 PUMP MFG: BALDOR INDUSTRIAL  
PUMP SERVICE: HW PUMP PUMP MODEL: 7M3155

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

### REMARKS:

SUSPECT ACM LOCATED ON PIPE FITTINGS AND HW STORAGE TANK.



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0621

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☐ BOILER

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_



☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT



☒ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 398,800

BLR CAP INPUT (BTUH): 398,800

COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 20

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 145 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

#### HW PUMP

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: MAGNETEK

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0650 BLDG NAME: COLD STOR FAC  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 22,331

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0652 BLDG NAME: COLD STOR FAC  
ELECTRIC METER: Y CONDITIONED SQFT: 8,167  
GAS METER: N  
SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
PRES STOP:	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>
REQ START:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
REQ STOP:	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0652 BLDG NAME: COLD STOR FAC  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: NONE  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: COPELAND TOWER MFG:  
CHILLER MODEL: GCMH-4000-TMC-104 # OF TOWER FANS: 0  
CHILLER SERIAL NO: TOWER FAN V: 0  
CHILLER V: 460 TOWER FAN AMPS: 0  
CHILLER AMPS: 0 TOWER FAN HP: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 15  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0652 BLDG NAME: COLD STOR FAC  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): MER  
AHU'S SERVED:  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	COPELAND	TOWER MFG:	
CHILLER MODEL:	GSNH-3000TMC-100	# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	15		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

**EMC NO: 1406-001**

DATE: 10/18/94

**PREPARED BY: JM/AJN/AMS**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0710

**BLDG NAME:** TAC EQUIP SHOP

ELECTRIC METER: ☒ Y

**CONDITIONED SQFT:** 2,173

**GAS METER:** ☒ Y

**SUSPECT ACM:** N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 5

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0710

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 19

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,000

CFM-CLG: 1,000

MIN %OA: 22

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0710

AHU NUMBER: MAU-1

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAY

% OF BLDG AREA HEATED: 19

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,650

CFM-CLG: 1,650

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0710

AHU NUMBER: UH-1

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 62

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,260

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: TOTAL FOR 4 UNIT HEATERS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0710

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX  
UNIT MODEL: WGFD400

BLR CAP OUTPUT (BTUH): 320,000  
BLR CAP INPUT (BTUH): 400,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 5

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 155 DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1  
PUMP SERVICE: HW PUMP

PUMP HP: 2

PUMP MFG: B & G  
PUMP MODEL: X917283/8DF

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0710 BLDG NAME: TAC EQUIP SHOP  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38ER030300	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0.9
CHILLER AMPS:	18.7	TOWER FAN HP:	0.5
CHILLER PH:	1		
CHILLER CAP (TONS):	5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0720

BLDG NAME: AF OPS BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 3,705

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 28

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0720

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 33.3

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

MIN %OA: 0

CFM-CLG: 1,800

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 58GS925-4

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CARRIER

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 28

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0720

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: ALL

% OF BLDG AREA HEATED: 33.3

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 1,800

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 58GS125-4

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CARRIER

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 28

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0720

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-3

SERVES AREA: ALL

% OF BLDG AREA HEATED: 33.3

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

MIN %OA: 10

CFM-CLG: 1,800

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 58GS125-4

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CARRIER

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 28

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0720

BLDG NAME: AF OPS BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EC060500  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 20.4  
CHILLER PH: 0  
CHILLER CAP (TONS): 5

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 208  
TOWER FAN AMPS: 2.4  
TOWER FAN HP: 0.4

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 28

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0720

BLDG NAME: AF OPS BLDG

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

## NAMEPLATE

CHILLER MFG: CARRIER

CHILLER MODEL: 38EC060500

CHILLER SERIAL NO:

CHILLER V: 208

CHILLER AMPS: 20.4

CHILLER PH: 0

CHILLER CAP (TONS): 5

TOWER MFG:

# OF TOWER FANS: 1

TOWER FAN V: 208

TOWER FAN AMPS: 2.4

TOWER FAN HP: 0.4

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 28

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0720 BLDG NAME: AF OPS BLDG  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-3  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38EC060500	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.4
CHILLER AMPS:	20.4	TOWER FAN HP:	0.4
CHILLER PH:	0		
CHILLER CAP (TONS):	5		

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 28 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	6	9	6	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

**DATE:** 10/18/94

**PREPARED BY: JM/AJN/AMS**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0722

**BLDG NAME:** FLIGHT SIMULATOR

ELECTRIC METER: N

CONDITIONED SQFT: 7,000

**GAS METER:** N

SUSPECT ACM: ☐ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0722

AHU NUMBER: AHU-1

AHU LOCATION: SIMULATOR ROOM

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: SIMULATOR EQUIPMENT RM

% OF BLDG AREA HEATED: 50

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 15,590

CFM-CLG: 15,590

MIN %OA: 25

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 20

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: FAIRBANKS MOR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: KZK

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0722

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: SIMULATOR EQUIP. ROOM

% OF BLDG AREA HEATED: 30

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,500

CFM-CLG: 7,500

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K215AD205B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	ATOMIZERS	<input checked="" type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 65

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0722

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMIN OFFICES, CLASSROOM

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,050

CFM-CLG: 4,050

MIN %OA: 25

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 5

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 60

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0722

AHU NUMBER: AHU-4

AHU LOCATION: SIMULATION RM

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: COMPUTER RM

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE CRU-COOLING ONLY

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 6,400

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: PAC

UNIT MODEL: CUXC-12

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 70

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0722

BOILER RM LOCATION: 2ND FL. MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: AHU-1,2,3

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM

BLR CAP OUTPUT (BTUH): 480,100

UNIT MODEL: 4FW92SPLOGP

BLR CAP INPUT (BTUH): 602,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 3

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0722 BLDG NAME: FLIGHT SIMULATOR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,3  
UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	CA2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	480
CHILLER V:	480	TOWER FAN AMPS:	2.3
CHILLER AMPS:	67.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y TEMP GAUGES: ☐ Y

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0722

BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-4

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: LARKIN  
CHILLER MODEL: PFG16  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 2.2  
CHILLER PH: 3  
CHILLER CAP (TONS): 16

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0723

BLDG NAME: MNT HANGAR COMB

ELECTRIC METER: N

CONDITIONED SQFT: 21,640

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

Suspect ACM located on heating pipe fittings

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0723  
AHU NUMBER: HV-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: 1ST FLR. MAINT. SHOPS  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,600  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: SUPPLY FAN HP: 0.25  
SUPPLY FAN MTR MFG: RET/EXH FAN HP: 0  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MFG:  
COMMENTS: RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0723

AHU NUMBER: UH-1

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM-BUSHCH

UNIT MODEL: VHJ-10

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K907B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0723

AHU NUMBER: UH-2

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM-BUSCH

UNIT MODEL: VHU-10

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K907B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0723

AHU NUMBER: UH-3

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM-BUSCH

UNIT MODEL: VHU-10

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K907B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0723

AHU NUMBER: UH-4

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM-BUSH

UNIT MODEL: VHU-10

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K907B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0723

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 90

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-311-40-LB

BLR CAP OUTPUT (BTUH): 2,603,000

BLR CAP INPUT (BTUH): 3,254,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0723

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT ☒ BLR/CONVERTER SERVES AREA OR SERVICE: BAY FLOOR

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: <input type="text"/> BOILER TYPE: <input type="text"/> FUEL TYPE: <input type="text"/>	<input checked="" type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CV-1 CONVERTER TYPE: STM TO HW CONV HT SOURCE: BLR-1
<input type="radio"/> CENTRAL PLANT DIRECT	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:   
UNIT MODEL:

BLR CAP OUTPUT (BTUH): 832,960  
BLR CAP INPUT (BTUH): 832,960

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT:  DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: ☒ N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0723 BLDG NAME: MNT HANGAR COMB  
PER RAD (SYSTEM TAG) NO: RAD-2 RAD SYS LOCATION: 1ST & 2ND FLR. OFFICES  
SOURCE OF HEATING: BLR-1 SERVES AREA: 1ST & 2ND FLR. OFFICES  
RADIATION UNIT TYPE: STEAM % AREA HTG: 25

### SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL: 2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0723	BLDG NAME:	MNT HANGAR COMB
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	BAY FLOOR
SOURCE OF HEATING:	CV-1	SERVES AREA:	BAY FLOOR
RADIATION UNIT TYPE:	HW	% AREA HTG:	32

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	BELL & GOSSETT
				PUMP MODEL:	M80037

### RADIATION PUMP

PUMP TAG:	2	PUMP HP:	0.5	PUMP MFG:	BELL & GOSSETT
				PUMP MODEL:	M80037

### SCHEDULE

DAYS SCHEDULE NO:	2	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	ELECTRIC		
RADIATION CONTROL:	2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB		
OCC HT SPACE SP:	0	RESET CONTROL:	N
UNOCC HT SPACE SP:	0		
CONTROL COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0724  
AHU NUMBER: AHU-1  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1  
SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 60

AHU UNIT TYPE MULTI ZONE  
NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 6,200  
MIN %OA: 10  
CFM-CLG: 6,200  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE  
UNIT MODEL: CCDB14CDCHO  
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0724  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-2 SERVES AREA: COMPUTER ROOM  
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,000 CFM-CLG: 6,000  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL: CCDB12CEMJ  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6-35741601 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	0724	AHU LOCATION:	COMPUTER ROOM
AHU NUMBER:	CRU-1		
REFRIG SYS # SRVNG AHU:	CH-3,4	SERVES AREA:	COMPUTER ROOM
		% OF BLDG AREA HEATED:	0
AHU UNIT TYPE	OTHER	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	0	CFM-CLG:	8,600
MIN %OA:	0	MAX %OA:	0

## NAMEPLATE

UNIT MFG:	LIEBERT	UNIT MODEL:	FE192GVA10
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	ELECTRIC	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0724

AHU NUMBER: CRU-2

AHU LOCATION: COMPUTER ROOM

REFRIG SYS # SRVNG AHU: CH-3,4

SERVES AREA: COMPUTER ROOM

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE OTHER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 8,600

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: LIEBERT

UNIT MODEL: FE192GVA10

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	ELECTRIC	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0724

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX  
UNIT MODEL: WGFD-450

BLR CAP OUTPUT (BTUH): 360,000  
BLR CAP INPUT (BTUH): 450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1 PUMP HP: 3  
PUMP SERVICE: HW PUMP

PUMP MFG: MARATHON  
PUMP MODEL: VBK215TTDR7026HTL

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0724 BLDG NAME: FLIGHT SIMULATOR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	CGADC254ABAIGTJWR	# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.8
CHILLER AMPS:	23.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	25		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: Y

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3  
PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MFG:  
PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0724 BLDG NAME: FLIGHT SIMULATOR  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.8
CHILLER AMPS:	17.2	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	20		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: VDC182TTDR7026DF

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0724 BLDG NAME: FLIGHT SIMULATOR  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: CRU-1,2  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	PRYCODER	TOWER MFG:	
CHILLER MODEL:	DSO419A	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	10		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	64	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0724 BLDG NAME: FLIGHT SIMULATOR  
REF. UNIT NUMBER/TAG: CH-4 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: CRU-1,2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	PRYCODER	TOWER MFG:	
CHILLER MODEL:	DSO419A	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	10		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 64 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0727 BLDG NAME: MNT HANGAR COMB  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 36,152

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: MAINT. SHOPS/TOOL ROOM

% OF BLDG AREA HEATED: 12

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,160

CFM-CLG: 5,160

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CCDV03APBB

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 200V

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0727	AHU LOCATION:	MER
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:	ACCU-1	SERVES AREA:	SHOPS AND BREAKROOM
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	4
CFM-HTG:	1,175	CFM-CLG:	1,175
MIN %OA:	10	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	TRANE	UNIT MODEL:	CCB12BBRBO
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	DOERR	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	11	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

AHU NUMBER: HV-1

AHU LOCATION: PAINT BOOTH

REFRIG SYS # SRVNG AHU:

SERVES AREA: PAINT BOOTH

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

AHU NUMBER: UH-1

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: 29SD2

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727

AHU NUMBER: UH-2

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800

MIN %OA: 0

CFM-CLG: 2,800

MAX %OA: 0

## NAMEPLATE

UNIT MFG: AIRTHERM

UNIT MODEL: 29SD2

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

AHU NUMBER: UH-3

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: 29SD2

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

AHU NUMBER: UH-4

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: AIRHERM

UNIT MODEL: 29SD2

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0727

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 33

BOILER MFG: KEWANEE

UNIT MODEL: M-335-KGO

BLR CAP OUTPUT (BTUH): 3,350,000

BLR CAP INPUT (BTUH): 4,181,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ADDITION

☒☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX

UNIT MODEL: WG450D

BLR CAP OUTPUT (BTUH): 360,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 150 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0727

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BAY FLOOR RADIATION

☐ BOILERBOILER TAG: BOILER TYPE: FUEL TYPE: ☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: BLR-1



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

33

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH):

1,000,000

BLR CAP INPUT (BTUH):

1,000,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT:  DEG F or PSIGTYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**

PUMP TAG: 2

PUMP HP: 1

PUMP MFG: 

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 0727 BLDG NAME: MNT HANGAR COMB  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: BAY FLOOR  
SOURCE OF HEATING: BLR-1 SERVES AREA: BAY FLOOR  
RADIATION UNIT TYPE: HW % AREA HTG: 33

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: CENTURY  
PUMP MODEL: SC-1845-FC4-7

**RADIATION PUMP**

PUMP TAG: 2 PUMP HP: 1.5 PUMP MFG: CENTURY  
PUMP MODEL: SC-1845-FC4-7

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0727 BLDG NAME: MNT HANGAR COMB  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUC-306-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.5
CHILLER AMPS:	13	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	16		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 0727 BLDG NAME: MNT HANGAR COMB  
REF. UNIT NUMBER/TAG: ACCU-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: RAUB-C153-A  
CHILLER SERIAL NO:  
CHILLER V: 230  
CHILLER AMPS: 71.4  
CHILLER PH: 0  
CHILLER CAP (TONS): 15

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.33

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0741

BLDG NAME: MNT HANGAR COMB

ELECTRIC METER: N

CONDITIONED SQFT: 38,898

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 24

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0741

AHU NUMBER: AHU-1

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: ALL

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: MCQUAY

UNIT MODEL: 71136-L-1/71136-L

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DOERR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 30004

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 65

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0741

AHU NUMBER: AHU-2

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: ALL

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: MCQUAY

UNIT MODEL: 71136-L1/71136-L-

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DOERR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 30004

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 65

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0741

AHU NUMBER: AHU-3

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: ALL

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG: MCQUAY

UNIT MODEL: 71136-L-1/71136-L

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DOERR

RET/EXH FAN MTR MFG: 0

SUPPLY FAN MTR MODEL: 30004

RET/EXH FAN MTR MODEL: 0

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 65

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0741

AHU NUMBER: AHU-4

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: ALL

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG: MCQUAY

UNIT MODEL: 71136-L-1/71136-L

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DOERR

RET/EXH FAN MTR MFG: 0

SUPPLY FAN MTR MODEL: 30004

RET/EXH FAN MTR MODEL: 0

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 65

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0741

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL675A40LB

BLR CAP OUTPUT (BTUH): 5,657,000

BLR CAP INPUT (BTUH): 7,071,000

COMMENTS: 5 HP BURNER MOTOR, 2EA 1 HP COND. PUMPS

### SCHEDULE

DAYS SCHEDULE NO: 24

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/95

PREPARED BY: JM/AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0751

BLDG NAME: AC PTS & TOE ST

ELECTRIC METER: N

CONDITIONED SQFT: 9,834

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/95  
PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0751  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ADMIN OFFICES  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE RESIDENTIAL FURNACE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200 CFM-CLG: 1,200  
MIN %OA: 10 MAX %OA: 10

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.33 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: SNYDER GENERA RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: GUG141A020N RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/18/95

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0751

AHU NUMBER: UH-1

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 90

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: TOTAL FOR 9 UNIT HEATERS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/95  
PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0751

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:****BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:  
CONVERTER TYPE:  
CONV HT SOURCE:

**CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FW9250LB

BLR CAP OUTPUT (BTUH): 616,000

BLR CAP INPUT (BTUH): 770,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/95  
PREPARED BY: JM/AJN/CWW

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0751 BLDG NAME: AC PTS & TOE ST  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	SNYDER GENERAL	TOWER MFG:	
CHILLER MODEL:	AD036G	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	1.1
CHILLER AMPS:	17.91	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	3		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	N	TEMP LITE HI:	N
PRESS LITE LOW:	N	TEMP LITE LOW:	N
PRESS GAUGES:	N	TEMP GAUGES:	N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/18/94

PREPARED BY: JM

## BUILDING DATA SURVEY OBSERVATIONS

**BLDG NUMBER:** 0760

BLDG NAME: BN HQ BLDG

ELECTRIC METER: N

**CONDITIONED SQFT:** 7,364

**GAS METER:** N

**SUSPECT ACM:** N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 39

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

## REMARKS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0760

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: BURNHAM

UNIT MODEL: FS/15

BLR CAP OUTPUT (BTUH): 558,000

BLR CAP INPUT (BTUH): 672,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 39

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 170 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0760 BLDG NAME: BN HQ BLDG  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION:  
SOURCE OF HEATING: BLR-1 SERVES AREA: ALL  
RADIATION UNIT TYPE: STEAM % AREA HTG: 100

### SCHEDULE

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: OTHER

OCC HT SPACE SP: 72

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0802

BLDG NAME: BN ADMIN &amp; CLRM

ELECTRIC METER: Y

CONDITIONED SQFT: 12,526

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 16

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0802

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 8

CFM-HTG: 7,605

CFM-CLG: 7,605

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AMQUAY

UNIT MODEL: LML117DH

SUPPLY FAN HP: 15

RET/EXH FAN HP: 15

SUPPLY FAN MTR MFG: AJAX

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: R015105/2A4

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 16

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0802

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☒ BOILER

BOILER TAG: HWP-1

BOILER TYPE: OTHER

FUEL TYPE: OTHER

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 16

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: RM1082190331L2740035

### HW PUMP

PUMP TAG: 2

PUMP HP: 0.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: RM1082190331L2740035

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0802

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CWP-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1

UNIT TYPE OTHER

**NAMEPLATE**

CHILLER MFG:   
CHILLER MODEL:   
CHILLER SERIAL NO:   
CHILLER V:  0  
CHILLER AMPS:  0  
CHILLER PH:  0  
CHILLER CAP (TONS):  0

TOWER MFG:   
# OF TOWER FANS:  0  
TOWER FAN V:  0  
TOWER FAN AMPS:  0  
TOWER FAN HP:  0

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 16

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRONIC

CWS SETPOINT:  0CNWS SETPOINT:  0CWR SETPOINT:  0CNWR SETPOINT:  0

PRESS LITE HI:  N  
PRESS LITE LOW:  N  
PRESS GAUGES:  N

TEMP LITE HI:  N  
TEMP LITE LOW:  N  
TEMP GAUGES:  N

OTHER INDICATIONS: CONTROLS COMMENTS: **CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: RN1081374-167-L0990309

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="8"/>	<input type="text" value="7"/>	<input type="text" value="8"/>	<input type="text" value="7"/>	<input type="text" value="8"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0804

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 5,575

CFM-CLG: 5,575

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MCQUAY

UNIT MODEL: LMLIICH

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: R314

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 16 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE:  
PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0804

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-1 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BLR CAP OUTPUT (BTUH): 0  
UNIT MODEL: BLR CAP INPUT (BTUH): 0  
COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 16

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG: US ELECTRIC  
PUMP SERVICE: HW PUMP PUMP MODEL: DM1082176-308L2970204

### HW PUMP

PUMP TAG: 2 PUMP HP: 0.75 PUMP MFG: US ELECTRIC  
PUMP SERVICE: HW PUMP PUMP MODEL: DM1082176-308L2970204

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0806 BLDG NAME: COMB AC-HTG PLANT  
ELECTRIC METER: ☒ Y CONDITIONED SQFT: 1,000  
GAS METER: ☒ Y  
SUSPECT ACM: ☐ N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0806

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: \_\_\_\_\_

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: _____ CONVERTER TYPE: _____ CONV HT SOURCE: _____
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: BURNHAM

UNIT MODEL: FS/45

BLR CAP OUTPUT (BTUH): 1,391,000

BLR CAP INPUT (BTUH): 1,600,000

COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 220 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

#### HW PUMP

PUMP TAG: HW-1

PUMP HP: 20

PUMP MFG: US ELEC

PUMP SERVICE: HW PUMP

PUMP MODEL: FV048000055K240R056

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0806

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: BLR-2  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:  
CONVERTER TYPE:  
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM  
UNIT MODEL: FD/45

BLR CAP OUTPUT (BTUH): 1,391,000  
BLR CAP INPUT (BTUH): 1,600,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 220 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HW-1  
PUMP SERVICE: HW PUMP

PUMP HP: 20

PUMP MFG: US ELEC  
PUMP MODEL: FV04800055K240R056

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0806

BLDG NAME: COMB AC-HTG PLANT

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: MCQUAY  
CHILLER MODEL: WHR070DA  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 113  
CHILLER PH: 0  
CHILLER CAP (TONS): 70

TOWER MFG: SNYDER GENERAL  
# OF TOWER FANS: 6  
TOWER FAN V: 0  
TOWER FAN AMPS: 4  
TOWER FAN HP: 1

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: CW-1

PUMP HP: 15

PUMP MFG:

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0806

BLDG NAME: COMB AC-HTG PLANT

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: MCQUAY  
CHILLER MODEL: WHR070DA  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 113  
CHILLER PH: 0  
CHILLER CAP (TONS): 70

TOWER MFG:  
# OF TOWER FANS: 6  
TOWER FAN V: 0  
TOWER FAN AMPS: 6  
TOWER FAN HP: 1

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ Y

OTHER INDICATORS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: CW-1

PUMP HP: 15

PUMP MFG:

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0808

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: Y

CONDITIONED SQFT: 12,526

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 16

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0808

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 8

CFM-HTG: 7,605

CFM-CLG: 7,605

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MCQUAY

UNIT MODEL: LML117DH

SUPPLY FAN HP: 15

RET/EXH FAN HP: 15

SUPPLY FAN MTR MFG: AJAX

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: RO15105/2A4

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 16

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0808

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☒ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE: OTHER

FUEL TYPE: OTHER

☐**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒**CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 16

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: RE1082190331L2740035

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: RM1082190331L2740035

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0808

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CWP-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1

UNIT TYPE OTHER

**NAMEPLATE**

CHILLER MFG:

CHILLER MODEL:

CHILLER SERIAL NO:

CHILLER V:

CHILLER AMPS:

CHILLER PH:

CHILLER CAP (TONS):

TOWER MFG:

# OF TOWER FANS:

TOWER FAN V:

TOWER FAN AMPS:

TOWER FAN HP:

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 16

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRONIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 0.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: RN108137-167L0990309

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/AMS/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0810

BLDG NAME: ADMIN &amp; SUPPLY BLDG

ELECTRIC METER: Y

CONDITIONED SQFT: 151,520

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 29

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/AMS/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	0810	AHU LOCATION:	ADMIN
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	ADMINISTRATION
		% OF BLDG AREA HEATED:	36.8
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	8,000	CFM-CLG:	8,000
MIN %OA:	15	MAX %OA:	15

## NAMEPLATE

UNIT MFG:	TRANE	UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	29	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:						
PRES START:	0	0	0	0	0	0						
PRES STOP:	24	24	24	24	24	24						
REQ START:	0	6	7	6	7	0						
REQ STOP:	0	20	19	20	19	0						
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	N

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0810

AHU NUMBER: HV-1

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: T6A

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 29

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0810  
AHU NUMBER: HV-2  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE  
UNIT MODEL: T6A  
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 29  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRL? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0810  
AHU NUMBER: HV-3  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE: HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE  
UNIT MODEL: T6A  
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 29  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/AMS/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0810

AHU NUMBER: HV-4

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG: TRANE

UNIT MODEL: T6A

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 29

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/AMS/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0810

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-1 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input checked="" type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:   
UNIT MODEL:   
COMMENTS:   
BLR CAP OUTPUT (BTUH):   
BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 29 MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
RESET CONTROLS: N  
CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-1 PUMP HP: 5 PUMP MFG: UNIMOUNT 125  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: 80184JP

#### HW PUMP

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/AMS/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0810

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 29

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 3

PUMP MFG: UNIMOUNT 125

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 182JP

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/AMS/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0810 BLDG NAME: ADMIN & SUPPLY BLDG  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#):  
AHU'S SERVED: FC-1  
UNIT TYPE CENTRAL PLANT

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 29 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	20	19	20	19	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: BELL & GOSSET  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0812	AHU LOCATION:	FC
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	ADMIN
		% OF BLDG AREA HEATED:	37
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	9,000	CFM-CLG:	1,800
MIN %OA:	10	MAX %OA:	10

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	TOTAL FOR 20 FAN COILS		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	33	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0812

AHU NUMBER: HV-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,820

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 33

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0812  
AHU NUMBER: HV-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: SERVES AREA: SUPPLY  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,820 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 33 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: 388  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0812

AHU NUMBER: HV-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,820

MIN %OA: 100

CFM-CLG: 0

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 33

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0812

AHU NUMBER: HV-4

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,820

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 33

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0812  
AHU NUMBER: HV-5 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: SERVES AREA: SUPPLY  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,820  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 33 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0812

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

BLR CAP OUTPUT (BTUH): 0

UNIT MODEL:

BLR CAP INPUT (BTUH): 0

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 33

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 3

PUMP MFG: UNIMOUNT 125

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 182JP

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AMS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0812

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 33

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 3

PUMP MFG: BALDOR

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: JPM5211T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0814	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	ALL
		% OF BLDG AREA HEATED:	35
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	6
CFM-HTG:	5,000	CFM-CLG:	5,000
MIN %OA:	30	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	TRANE	UNIT MODEL:	MCCA010GAE0AB
SUPPLY FAN HP:	7.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	DAYTON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	63	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	6	6	6	6	6	0					
PRES STOP:	0	15	15	15	15	15	0					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	15	15	15	15	15	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	70	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	70	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	Y
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	Y	IMPLEMENT DEMAND LIMIT CNTRLs?	Y
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	Y

OTHER CONTROLS DESCR: AHU HAS NITE SET BACK AND VENT./ RECIRC. CONTROL  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0814

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 65

BOILER MFG: PEERLESS  
UNIT MODEL: G-JO-9FDA-WUP

BLR CAP OUTPUT (BTUH): 566,000  
BLR CAP INPUT (BTUH): 707,500

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 22 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	15	15	15	15	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 210 DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: Y

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: B&G  
PUMP SERVICE: HW PUMP PUMP MODEL: M98559D39

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0814	BLDG NAME:	MEDICAL FAC - NEW
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:	BLR-1	SERVES AREA:	PERIMETER ROOMS
RADIATION UNIT TYPE:	HW	% AREA HTG:	65

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	2	PUMP MFG:	B & G
				PUMP MODEL:	M98559D39

### SCHEDULE

DAYS SCHEDULE NO:	22	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	15	15	15	15	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	ELECTRIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0814 BLDG NAME: MEDICAL FAC - NEW  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	20A0CS25	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	82.2	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	20		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 22 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	15	15	15	15	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N  
CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: US ELEC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: P63CTD-2931

**CW and CNW PUMPS**

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/18/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0814 BLDG NAME: MEDICAL FAC - NEW  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: CH-1  
UNIT TYPE

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 22 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	15	15	15	15	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N  
CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: CWP-1 PUMP HP: 2 PUMP MFG: US ELECTRIC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: P63CTD-2931

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0817

BLDG NAME: MNT HANGAR AVUM

ELECTRIC METER: Y

CONDITIONED SQFT: 40,061

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 19

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: AHU-1

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,330

CFM-CLG: 1,330

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: Y

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: AHU-2

AHU LOCATION:

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: Y

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817  
AHU NUMBER: AHU-3 AHU LOCATION:   
REFRIG SYS # SRVNG AHU: CH-3 SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 3

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 CFM-CLG: 2,400  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:   
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: Y TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: H&amp;V-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAYS/OFFICE

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,678

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: H&amp;V-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAYS/OFFICES

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILLATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,678

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: H&amp;V-3

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAYS/OFFICE

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILLATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,678

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: H&amp;V-4

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAYS/ OFFICE

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILLATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,678

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: H&amp;V-5

AHU LOCATION: ADMIN AREAS

REFRIG SYS # SRVNG AHU:

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE HEATING AND VENTILATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,800

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

AHU NUMBER: H&amp;V-6

AHU LOCATION: ADMIN AREAS

REFRIG SYS # SRVNG AHU:

SERVES AREA: ADMIN

% OF BLDG AREA HEATED:

5

AHU UNIT TYPE HEATING AND VENTILATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 19

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0817

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BAY FLOORS & MAUS

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐

CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FW-360A-40-G-PF

BLR CAP OUTPUT (BTUH): 3,015,000

BLR CAP INPUT (BTUH): 3,769,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 19

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

#### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0817

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 19

MONTH SECHDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 0817	BLDG NAME: MNT HANGAR AVUM
PER RAD (SYSTEM TAG) NO: RAD-1	RAD SYS LOCATION: BAYS
SOURCE OF HEATING:	SERVES AREA:
RADIATION UNIT TYPE: HW	% AREA HTG: 60

**RADIATION PUMP**

PUMP TAG: 1	PUMP HP: 10	PUMP MFG: US ELEC.
		PUMP MODEL: 9242C/N09N183R084F

**RADIATION PUMP**

PUMP TAG: 2	PUMP HP: 0	PUMP MFG: US ELEC. - 10 HP STANDBY
		PUMP MODEL: 9242C/N09N183R084F

**SCHEDULE**

DAYS SCHEDULE NO: 19	MONTHS SCHEDULE NO: 1
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SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0817

BLDG NAME: MNT HANGAR AVUM

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: SNYDER GENERAL

CHILLER MODEL: ADO48F

CHILLER SERIAL NO:

CHILLER V: 460

CHILLER AMPS: 8.3

CHILLER PH: 0

CHILLER CAP (TONS): 4

TOWER MFG:

# OF TOWER FANS: 1

TOWER FAN V: 460

TOWER FAN AMPS: 1.3

TOWER FAN HP: 0.2

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 19

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 0817 BLDG NAME: MNT HANGAR AVUM  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	SNYDER GENERAL	TOWER MFG:	
CHILLER MODEL:	ADO48F	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.3
CHILLER AMPS:	8.3	TOWER FAN HP:	0.2
CHILLER PH:	0		
CHILLER CAP (TONS):	4		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 19 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:	
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>		
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>		

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 0817 BLDG NAME: MNT HANGAR AVUM  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-3  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	SNYDER GENERAL	TOWER MFG:	
CHILLER MODEL:	CO8001	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.5
CHILLER AMPS:	15.8	TOWER FAN HP:	0.75
CHILLER PH:	0		
CHILLER CAP (TONS):	8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 19 MONTHS SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	7	6	7	6	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0820

BLDG NAME: TAC EQUIP SHOP

ELECTRIC METER: Y

CONDITIONED SQFT: 20,564

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 39

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0820

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 45

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800

CFM-CLG: 4,800

MIN %OA: 12

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE CLIMATE CHANGER

UNIT MODEL: A85F65042

SUPPLY FAN HP: 5

RET/EXH FAN HP: 5

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/DDC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0820

AHU NUMBER: HV-1

AHU LOCATION: OFFICES

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0820

AHU NUMBER: MAU-1

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,100

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: HOT WATER

☒

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0820  
AHU NUMBER: MAU-2 AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU: SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,100 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0820

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 15

BOILER MFG: BURNHAM

UNIT MODEL: 4FW-277-40-LB

BLR CAP OUTPUT (BTUH): 2,318,000

BLR CAP INPUT (BTUH): 2,898,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 39

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: JC DSC- 8500 CONTROL PANEL

**HW PUMP**

PUMP TAG: 1

PUMP HP: 10

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: E810AU11U253R112F



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0820

BLDG NAME: TAC EQUIP SHOP

REF. UNIT NUMBER/TAG: ACCU-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: RAUC-C124-C  
CHILLER SERIAL NO:  
CHILLER V:  
CHILLER AMPS: 10.7  
CHILLER PH: 0  
CHILLER CAP (TONS): 12

TOWER MFG:  
# OF TOWER FANS: 3  
TOWER FAN V: 0  
TOWER FAN AMPS: 2.7  
TOWER FAN HP: 0.75

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 39

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0833

AHU NUMBER: AHU-1

AHU LOCATION: RM 13

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED:

0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 1,800

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0833  
AHU NUMBER: AHU-2 AHU LOCATION: RM 47  
REFRIG SYS # SRVNG AHU: CH-2 SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 15

CFM-CLG: 1,550  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.75 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0833  
AHU NUMBER: H&V-1 AHU LOCATION: RM 7  
REFRIG SYS # SRVNG AHU: SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,475  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0833  
AHU NUMBER: H&V-2 AHU LOCATION: RM 29  
REFRIG SYS # SRVNG AHU: SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,485  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0833

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: FLOORS AND MAU'S

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: PVI BOILER

BLR CAP OUTPUT (BTUH): 3,320,000

UNIT MODEL: 100WBHE225ATP

BLR CAP INPUT (BTUH): 4,000,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: O2 TRIM

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0833

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: HWP-1

PUMP HP: 5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0833	BLDG NAME:	AIRCRAFT HANGAR
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	70

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	2	PUMP MFG:	U.S. ELECTRIC
				PUMP MODEL:	65-04173-136L0040134

### RADIATION PUMP

PUMP TAG:	2	PUMP HP:	0	PUMP MFG:	U.S. ELECTRIC - 2 HP STANDB
				PUMP MODEL:	65-041730136L0040134

### SCHEDULE

DAYS SCHEDULE NO:	4	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	ELECTRIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	N
CONTROL COMMENTS:	

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AMS/AJN

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0833 BLDG NAME: AIRCRAFT HANGAR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	BRYANT	TOWER MFG:	
CHILLER MODEL:	565BE060	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.2
CHILLER AMPS:	10.4	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	6		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AMS/AJN

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0833

BLDG NAME: AIRCRAFT HANGAR

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: BRYANT  
CHILLER MODEL: 565BE048  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 7  
CHILLER PH: 0  
CHILLER CAP (TONS): 4

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 460  
TOWER FAN AMPS: 1.2  
TOWER FAN HP: 0.5

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 4

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0835

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 67

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,500

CFM-CLG: 18,500

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CARRIER

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: JOHNSON CONTROLS DSC-8500 SYSTEM CONTROLLER

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	0835	BLDG NAME:	MAF OPS BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	STORAGE
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	33

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	SLAB PUMP
				PUMP MODEL:	

**RADIATION PUMP**

PUMP TAG:	2	PUMP HP:	1.5	PUMP MFG:	STANDBY PUMP
				PUMP MODEL:	

**SCHEDULE**

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	ELECTRIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	N
CONTROL COMMENTS:	

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0835 BLDG NAME: MAF OPS BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	CARRIER
CHILLER MODEL:	50BABK028500	# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	6.4
CHILLER AMPS:	55	TOWER FAN HP:	1.75
CHILLER PH:	0		
CHILLER CAP (TONS):	25		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

**PREPARED BY:**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0840

BLDG NAME: VEHICLE MNT SHOP ORG

ELECTRIC METER: ☒ Y

**CONDITIONED SQFT:** 9,152

**GAS METER:** Y

SUSPECT ACM: **N**

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

## REMARKS:

[illegible]



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0840

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,460

CFM-CLG: 1,460

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0840  
AHU NUMBER: HV-1  
AHU LOCATION: RM-101  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT SHOP  
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE HEATING AND VENTILLATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,370  
MIN %OA: 58

CFM-CLG: 2,370  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:   
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0840

AHU NUMBER: MAU-1

AHU LOCATION:

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKEUP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED @ 215,500 BTUH CAPACITY

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0840

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE ☐  
HEATING COIL: NONE ☐  
REHEAT COIL: NONE ☐  
HUMIDIFIER: NONE ☐  
COOLING COIL: NONE ☐

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 0840

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: AJAX

UNIT MODEL: WGFD-600

BLR CAP OUTPUT (BTUH):

480,000

BLR CAP INPUT (BTUH):

600,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

11

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

1.5

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: M3154T-8

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0840

BLDG NAME: VEHICLE MNT SHOP ORG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EN060630  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 10.4  
CHILLER PH: 0  
CHILLER CAP (TONS): 6

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 460  
TOWER FAN AMPS: 1.6  
TOWER FAN HP: 0.33

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 0853

BLDG NAME: MNT HANGAR AVUM

ELECTRIC METER: Y

CONDITIONED SQFT: 48,112

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 41

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0853  
AHU NUMBER: AHU-1 AHU LOCATION: RM 3  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ADMIN  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,000 CFM-CLG: 3,000  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 41 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0853

AHU NUMBER: AHU-2

AHU LOCATION: 17

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,700

CFM-CLG: 2,700

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 41

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0853

AHU NUMBER: AHU-3

AHU LOCATION: RM 29

REFRIG SYS # SRVNG AHU: CH-3

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,000

CFM-CLG: 3,000

MIN %OA: 20

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 41

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0853

AHU NUMBER: HV-1

AHU LOCATION: RM. 14

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 7

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 41

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0853  
AHU NUMBER: HV-2  
AHU LOCATION: 39  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,100  
MIN %OA: 25

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 41  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	0853	AHU LOCATION:	MAINT. BAYS
AHU NUMBER:	MAU-1		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	MAINT. BAYS
		% OF BLDG AREA HEATED:	15
AHU UNIT TYPE	MAKE-UP AIR UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	7,000	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	3	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	41	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0853  
AHU NUMBER: MAU-2  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 41  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 0853  
AHU NUMBER: MAU-3  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 41  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0853

AHU NUMBER: MAU-4

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 15

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 41

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0853

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

70

BOILER MFG: BURNHAM

UNIT MODEL: 4FW34SWOGPF

BLR CAP OUTPUT (BTUH): 2,887,000

BLR CAP INPUT (BTUH): 3,609,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 41

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

### HW PUMP

PUMP TAG: 2

PUMP HP: 0

PUMP MFG:

5 HP - STANDBY

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 0853 BLDG NAME: MNT HANGAR AVUM  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: BAYS  
SOURCE OF HEATING: BLR-1 SERVES AREA: BAYS  
RADIATION UNIT TYPE: HW % AREA HTG: 70

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG:   
PUMP MODEL:

**RADIATION PUMP**

PUMP TAG: 2 PUMP HP: 0 PUMP MFG: 3 HP - STANDBY  
PUMP MODEL:

**SCHEDULE**

DAYS SCHEDULE NO: 41 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0853 BLDG NAME: MNT HANGAR AVUM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38BA008630	# OF TOWER FANS:	1
CHILLER SERIAL NO:	2587G12310	TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.3
CHILLER AMPS:	4	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	5		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 41 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 0853 BLDG NAME: MNT HANGAR AVUM  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38BA008630	# OF TOWER FANS:	1
CHILLER SERIAL NO:	2587G12310	TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.3
CHILLER AMPS:	4	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	5		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 41 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 0853

BLDG NAME: MNT HANGAR AVUM

REF. UNIT NUMBER/TAG: CH-3

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-3

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG: CARRIER

CHILLER MODEL: 38BA008630

CHILLER SERIAL NO: 2587G12310

CHILLER V: 460

CHILLER AMPS: 4

CHILLER PH: 3

CHILLER CAP (TONS): 5

TOWER MFG:

# OF TOWER FANS: 1

TOWER FAN V: 460

TOWER FAN AMPS: 1.3

TOWER FAN HP: 0.75

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 41

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	1470	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	ACCU-1	SERVES AREA:	OFFICES/CLASSROOM
		% OF BLDG AREA HEATED:	8
AHU UNIT TYPE		NUMBER OF ZONES IF MZ UNIT:	
SINGLE ZONE		0	
CFM-HTG:	2,500	CFM-CLG:	2,500
MIN %OA:	25	MAX %OA:	25

**NAMEPLATE**

UNIT MFG:	TRANE	UNIT MODEL:	BAUA359C-B
SUPPLY FAN HP:	0.33	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	11	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 1470

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-2

SERVES AREA: ADDITION OFFICES

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000

CFM-CLG: 2,000

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: SNYDER GENERAL

UNIT MODEL: GUG141A020IN

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: RESIDENTIAL GAS-FIRED FURNANCE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	GAS	<input type="checkbox"/>
REHEAT COIL:	HOT WATER	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 1470  
AHU NUMBER: MAU-1  
AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAY  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 22,200  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 20  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	GAS	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 1470  
AHU NUMBER: UH-1  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 55

AHU UNIT TYPE: UNIT HEATER  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,320  
MIN %OA: 0  
CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 1470

AHU NUMBER: UH-2

AHU LOCATION: WAREHOUSE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: WAREHOUSE

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: TOTAL OF 4 FAIN COIL UNITS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 1470

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE

UNIT MODEL: 3R6-RO

BLR CAP OUTPUT (BTUH): 792,000

BLR CAP INPUT (BTUH): 990,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 145 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: YYE145TTDR5352AA

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 1470

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

8

BOILER MFG: KEWANEE

UNIT MODEL: 3R6-RO

BLR CAP OUTPUT (BTUH):

792,000

BLR CAP INPUT (BTUH):

990,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 145 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: YYE145TTDR5352AA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 1470

BLDG NAME: AR VEH MNT SHOP

REF. UNIT NUMBER/TAG: ACCU-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: RAUC-256-A  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 9  
CHILLER PH: 0  
CHILLER CAP (TONS): 5

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 2.5  
TOWER FAN HP: 0.33

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 1470 BLDG NAME: AR VEH MNT SHOP  
REF. UNIT NUMBER/TAG: ACCU-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	INTERCITY PRODUCTS	TOWER MFG:	
CHILLER MODEL:	AD060H	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.3
CHILLER AMPS:	19.6	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 4010

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE DUAL DUCT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 17,560

CFM-CLG: 17,560

MIN %OA: 0

MAX %OA: 50

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: BLOW THRU

SUPPLY FAN HP: 30

RET/EXH FAN HP: 5

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG: MARATHON

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL: TB184TTDR7026D

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	HOT WATER	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/DDC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 4010

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX

UNIT MODEL: WGFD-1750

BLR CAP OUTPUT (BTUH): 1,400,000

BLR CAP INPUT (BTUH): 1,750,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 4010

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

☐

☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

#### HW PUMP

PUMP TAG: HWP-1

PUMP HP: 1

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 4010

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: HWP-2 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:

BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: HWP-2

PUMP HP: 1

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 4010	BLDG NAME: DENTAL CLINIC
PER RAD (SYSTEM TAG) NO: RAD-1	RAD SYS LOCATION: PERIMETER FO BLDG
SOURCE OF HEATING: BLR-1	SERVES AREA: PERIMETER FO BLDG
RADIATION UNIT TYPE: HW BASEBOARD	% AREA HTG: 60

**RADIATION PUMP**

PUMP TAG: 1	PUMP HP: 0.25	PUMP MFG: ARMSTRONG
		PUMP MODEL: 1B-1000 BF

**RADIATION PUMP**

PUMP TAG: 2	PUMP HP: 0.25	PUMP MFG: ARMSTRON
		PUMP MODEL: 1B-1000 BF

**RADIATION PUMP**

PUMP TAG: 3	PUMP HP: 0.25	PUMP MFG: ARMSTRONG
		PUMP MODEL: 1B-1000 BF

**RADIATION PUMP**

PUMP TAG: 4	PUMP HP: 0.25	PUMP MFG: ARMSTRONG
		PUMP MODEL: 1B-1000 BF

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: ☒ N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 4010 BLDG NAME: DENTAL CLINIC  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	IRC	TOWER MFG:	
CHILLER MODEL:	MALC-9046	# OF TOWER FANS:	6
CHILLER SERIAL NO:	ICO4SA66	TOWER FAN V:	0
CHILLER V:	480	TOWER FAN AMPS:	3.6
CHILLER AMPS:	0	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	80		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 36

CNWS SETPOINT: 0

CWR SETPOINT: 55

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: SVL184TTDR7

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 5000

BLDG NAME: FIRE STATION

ELECTRIC METER: N

CONDITIONED SQFT: 8,400

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

Two gas-fired infrared heaters in bay, reverber ray 24" x 24"

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 5000

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: COMMUNICATIONS/QUARTER

% OF BLDG AREA HEATED: 60

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 4,155

CFM-CLG: 4,155

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: VMZ32D

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 120

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 5000  
AHU NUMBER: AHU-2 AHU LOCATION: ABOVE CEILING  
REFRIG SYS # SRVNG AHU: SERVES AREA: VEHICLE MAINT. BAY  
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,840  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5000

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX

UNIT MODEL: WG-750

BLR CAP OUTPUT (BTUH):

600,000

BLR CAP INPUT (BTUH):

750,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 170 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.17

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 5000 BLDG NAME: FIRE STATION  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CS10	# OF TOWER FANS:	1
CHILLER SERIAL NO:	9084-2	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	4.6
CHILLER AMPS:	42.8	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	10		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 5302

BLDG NAME: POST OFFICE

ELECTRIC METER: ☒

CONDITIONED SQFT: 12,240

GAS METER: ☒

SUSPECT ACM: ☒

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 26

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

**REMARKS:**

SUSPECT ACM LOCATED ON PIPE FITTINGS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CVWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 5302  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ALL  
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 4

CFM-HTG: 12,660 CFM-CLG: 12,660  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM - BUSH UNIT MODEL: MZ-120  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 26 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 68 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 68 MIXED AIR DEG F:  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 5302

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 50

BOILER MFG: BURNHAM  
UNIT MODEL: FDO14

BLR CAP OUTPUT (BTUH): 507,000  
BLR CAP INPUT (BTUH): 608,400

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 26

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:   
CONTROLS COMMENTS:

RESET CONTROLS: Y

#### HW PUMP

PUMP TAG: 1 PUMP HP: 1  
PUMP SERVICE: HW PUMP

PUMP MFG: BALDOR  
PUMP MODEL: M3116

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	5302	BLDG NAME:	POST OFFICE
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	50

**RADIATION PUMP**

PUMP TAG:	2	PUMP HP:	1	PUMP MFG:	WAGNER
				PUMP MODEL:	J56-55376-00

**SCHEDULE**

DAYS SCHEDULE NO: 26 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:

RADIATION CONTROL:

OCC HT SPACE SP:  0

UNOCC HT SPACE SP:  0

RESET CONTROL:  N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 5302 BLDG NAME: POST OFFICE  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CD55	# OF TOWER FANS:	4
CHILLER SERIAL NO:	10656-8	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.8
CHILLER AMPS:	88.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	54		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 26 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	10	8	8	10
REQ STOP:	0	17	17	17	17	17	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATORS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y TEMP GAUGES: ☐ N

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 5309

BLDG NAME: GUEST HOUSE

ELECTRIC METER: Y

CONDITIONED SQFT: 23,784

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5309

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM  
UNIT MODEL: E30

BLR CAP OUTPUT (BTUH): 1,004,000  
BLR CAP INPUT (BTUH): 1,255,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 185 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: E790A

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 5309

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW CONV.

☒

☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: LOW PRESS STEAM (<15#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 410B

BLR CAP OUTPUT (BTUH): 245,700

BLR CAP INPUT (BTUH): 315,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5309

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 3

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: E790A

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 5309 BLDG NAME: GUEST HOUSE  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FC-1  
UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAMCC50GPD03DT	# OF TOWER FANS:	6
CHILLER SERIAL NO:	J90C82056	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	4.1
CHILLER AMPS:	60.5	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	50		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 38

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: BALDOR  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: M3218T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 5315

BLDG NAME: MORRIS HILL CHAPEL

ELECTRIC METER: N

CONDITIONED SQFT: 19,748

GAS METER: Y

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 17

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	5315	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1 & CH-2	SERVES AREA:	ALL
		% OF BLDG AREA HEATED:	40
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	13,500	CFM-CLG:	13,500
MIN %OA:	20	MAX %OA:	100

## NAMEPLATE

UNIT MFG:	GOVERNAIR	UNIT MODEL:	VC-H-2-20-LH
SUPPLY FAN HP:	10	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON ELEC	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	2C-256UTDR57CC	RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	17	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	9	7	7	7	7	7	10					
REQ STOP:	13	21	21	21	21	21	19					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	PNEUMATIC/DDC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	60	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	60	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	Y	MIXED AIR DMPR CONTROL:	Y	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	5315	AHU LOCATION:	ADMIN OFFICES
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CH-1, CH-2, CH-3	SERVES AREA:	ADMIN OFFICES
		% OF BLDG AREA HEATED:	20
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	7,200	CFM-CLG:	7,200
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	CHRYSLER	UNIT MODEL:	AIR TEMP
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	TOTAL FOR 12 FAN COILS		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	17	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	9	7	7	7	7	7	10					
REQ STOP:	13	21	21	21	21	21	19					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	5315	AHU LOCATION:	CONF. CENTER
AHU NUMBER:	FC-2		
REFRIG SYS # SRVNG AHU:	CH-1, CH-2, CH-3	SERVES AREA:	CONF. CENTER
		% OF BLDG AREA HEATED:	24
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	8,000	CFM-CLG:	8,000
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	CHRYSLER	UNIT MODEL:	AIR TEMP
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	TOTAL FOR 12 FAN COILS		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	17	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	9	7	7	7	7	7	10					
REQ STOP:	13	21	21	21	21	21	19					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 5315  
AHU NUMBER: FC-3 AHU LOCATION: CHAPEL OFFICES  
REFRIG SYS # SRVNG AHU:            SERVES AREA: CHAPEL OFFICES  
% OF BLDG AREA HEATED:            16

AHU UNIT TYPE FAN COILS - 2 PIPE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 CFM-CLG: 3,500  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: CHRYSLER UNIT MODEL: AIR TEMP  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:            RET/EXH FAN MTR MFG:             
SUPPLY FAN MTR MODEL:            RET/EXH FAN MTR MODEL:             
COMMENTS: TOTAL FOR 9 FAN COILS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	<u>NONE</u>	<input type="checkbox"/>
HEATING COIL:	<u>HOT WATER</u>	<input checked="" type="checkbox"/>
REHEAT COIL:	<u>NONE</u>	<input type="checkbox"/>
HUMIDIFIER:	<u>NONE</u>	<input type="checkbox"/>
COOLING COIL:	<u>CW</u>	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 17 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:           

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
PRES STOP:	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>
REQ START:	<u>9</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>10</u>
REQ STOP:	<u>13</u>	<u>21</u>	<u>21</u>	<u>21</u>	<u>21</u>	<u>21</u>	<u>19</u>

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:             
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:             
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 5315

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

##### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

##### CONVERTER

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 1,516,000

BLR CAP INPUT (BTUH): 1,743,000

COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 17

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

#### HW PUMP

PUMP TAG: 1

PUMP HP: 5

PUMP MFG: \_\_\_\_\_

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

#### HW PUMP

PUMP TAG: 2

PUMP HP: 1.5

PUMP MFG: MARATHON ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: WVB56T34D1036BW

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

#### HW PUMP

PUMP TAG:	3	PUMP HP:	0.75	PUMP MFG:	US ELECTRIC HIGH EFF.
PUMP SERVICE:	HW PUMP			PUMP MODEL:	GT-1005112-631

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5315

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 17

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 1.5

PUMP MFG: MARATHON ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: WVB56T34D1036BW

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5315

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

<input type="radio"/> <b>BOILER</b> BOILER TAG: HWP-2 BOILER TYPE: _____ FUEL TYPE: _____	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: _____ CONVERTER TYPE: _____ CONV HT SOURCE: _____
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_  
UNIT MODEL: \_\_\_\_\_BLR CAP OUTPUT (BTUH): \_\_\_\_\_  
BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 17

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: HWP-2	PUMP HP: 0.75	PUMP MFG: US ELECTRIC HIGH EFF.
PUMP SERVICE: HW PUMP		PUMP MODEL: GT-1005112-631

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 5315 BLDG NAME: MORRIS HILL CHAPEL  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, FC-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	G & W ACME	TOWER MFG:	BOHN
CHILLER MODEL:	DHA-64	# OF TOWER FANS:	4
CHILLER SERIAL NO:	JJL0003	TOWER FAN V:	208
CHILLER V:	230	TOWER FAN AMPS:	7.2
CHILLER AMPS:	120.5	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	61		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 17 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC

CWS SETPOINT: 46 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATORS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: LINCON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 5315 BLDG NAME: MORRIS HILL CHAPEL  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, FC-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	G & W ACME	TOWER MFG:	BOHN
CHILLER MODEL:	DHA-64	# OF TOWER FANS:	4
CHILLER SERIAL NO:	JJL0003	TOWER FAN V:	208
CHILLER V:	230	TOWER FAN AMPS:	7.2
CHILLER AMPS:	120.5	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	61		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 17 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC

CWS SETPOINT: 46 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: LINCOLN  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 5315 BLDG NAME: MORRIS HILL CHAPEL  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, FC-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	WC-2C-510	# OF TOWER FANS:	2
CHILLER SERIAL NO:	9129-1	TOWER FAN V:	230
CHILLER V:	208	TOWER FAN AMPS:	2.2
CHILLER AMPS:	42.8	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	10.5		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 17 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC

CWS SETPOINT: 45 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: US ELECTRIC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: F107

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 5800

BLDG NAME: YOUTH CTR

ELECTRIC METER: Y

CONDITIONED SQFT: 21,560

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 48

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	5800	AHU LOCATION:	MER MEZZANINE
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	MEZZ AND 1ST FLOOR
		% OF BLDG AREA HEATED:	60
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	8
CFM-HTG:	12,300	CFM-CLG:	12,300
MIN %OA:	10	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	MCQUAY	UNIT MODEL:	
SUPPLY FAN HP:	15	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	BALDOR	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	EM2513T	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	48	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	5	5	5	8	8					
REQ STOP:	0	22	19	19	19	2	19					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input checked="" type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input checked="" type="checkbox"/>
MAX OA DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER DB CONTROL:	<input checked="" type="checkbox"/>	TIME CLOCK:	<input checked="" type="checkbox"/>
RET AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER WB CONTROL:	<input checked="" type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input checked="" type="checkbox"/>
EXH AIR DMPR CONTROL:	<input checked="" type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 5800  
AHU NUMBER: AHU-2  
REFRIG SYS # SRVNG AHU: CH-1  
AHU LOCATION: MER MEZZANINIE  
SERVES AREA: 1ST FLOOR  
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,020  
MIN %OA: 15  
CFM-CLG: 8,020  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MCQUAY  
SUPPLY FAN HP: 7.5  
SUPPLY FAN MTR MFG: MAGNETIK  
SUPPLY FAN MTR MODEL: 6-355802-01  
COMMENTS:  
UNIT MODEL:  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 48  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: Y  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 5800

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX

UNIT MODEL: WGB-600

BLR CAP OUTPUT (BTUH): 480,000

BLR CAP INPUT (BTUH): 600,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 48

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 0.17

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: VQA56517D170D

### HW PUMP

PUMP TAG: 2

PUMP HP: 2

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5800

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:** ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-2 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX  
UNIT MODEL: WGB-600

BLR CAP OUTPUT (BTUH): 480,000  
BLR CAP INPUT (BTUH): 600,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 48 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 180 DEG F or PSIG  
TYPE OF BURNER CONTROLS:   
RESET CONTROLS: Y  
CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1 PUMP HP: 0.17 PUMP MFG: MARATHON  
PUMP SERVICE: HW PUMP PUMP MODEL: VQA56517D170D

**HW PUMP**

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5800

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 48

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 2

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 5800

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

☐☐ BOILER

BOILER TAG: HWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

48

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-2

PUMP HP: 2

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 5800 BLDG NAME: YOUTH CTR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2  
UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

### NAMEPLATE

CHILLER MFG:	MCQUAY	TOWER MFG:	AIRCON
CHILLER MODEL:	WHR060DA	# OF TOWER FANS:	4
CHILLER SERIAL NO:	SVE0186600	TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	2
CHILLER AMPS:	53	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	53.7		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 48 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	5	5	5	8	8
REQ STOP:	0	22	19	19	19	2	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: WASAU  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: VN182TTDR5326AA

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

### REMARKS:

BLDG. CONTACT: MACK MCMULLEN @ 239-9532 OR 9533

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6620  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: WEST WING  
% OF BLDG AREA HEATED: 32

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 7

CFM-HTG: 12,910 CFM-CLG: 12,910  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RELIANCE RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: Y149924A1LL RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 60 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6620

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: BALL ROOM

% OF BLDG AREA HEATED: 23

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,600

CFM-CLG: 9,600

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: TYPE 21

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GENERAL MOTOR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: B-2222A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 60

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SETBACK

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	6620	AHU LOCATION:	MER
AHU NUMBER:	AHU-3		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	KITCHEN
		% OF BLDG AREA HEATED:	14
AHU UNIT TYPE	HEATING AND VENTILATING	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	10,500	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	TRANE	UNIT MODEL:	21
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	1AS15TVR26BDW	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	60	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	7	7	7	7	7	0					
PRES STOP:	0	16	16	16	16	16	0					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	Y	IMPLEMENT DEMAND LIMIT CNTRLS?	Y
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	Y
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	Y
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6620  
AHU NUMBER: AHU-4  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1  
SERVES AREA: DINNING ROOM  
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,800  
MIN %OA: 34

CFM-CLG: 8,800  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE  
SUPPLY FAN HP: 5  
SUPPLY FAN MTR MFG: DOER  
SUPPLY FAN MTR MODEL:  
COMMENTS:  
UNIT MODEL: 21  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 60  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: Y  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? Y  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 6620

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



##### BOILER

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (<15#)

FUEL TYPE: NAT. GAS



##### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

8

BOILER MFG: CLEAVER BROOKS

UNIT MODEL: 153-700-4520

BLR CAP OUTPUT (BTUH):

4,520,000

BLR CAP INPUT (BTUH):

5,736,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC/ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 6620

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: BLR-1

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 8

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 4,520,000

BLR CAP INPUT (BTUH): 4,520,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	6620	BLDG NAME:	COMMUN ACT CTR
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	RMS-103,106,109,11,114,115,116
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	8

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	
				PUMP MODEL:	

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	ELECTRIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	N
CONTROL COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 6620 BLDG NAME: COMMUN ACT CTR  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1,2,4  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CM130SP	# OF TOWER FANS:	12
CHILLER SERIAL NO:	8723-2	TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	237	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	130		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 42

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 7.5 PUMP MFG: GOULD  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: 6330778-03

**CW and CNW PUMPS**

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 6620

BLDG NAME: COMMUN ACT CTR

REF. UNIT NUMBER/TAG: CWP-1

LOCATION (MER#): MER

AHU'S SERVED: CH-1

UNIT TYPE

### NAMEPLATE

CHILLER MFG:   
CHILLER MODEL:   
CHILLER SERIAL NO:   
CHILLER V:  0  
CHILLER AMPS:  0  
CHILLER PH:  0  
CHILLER CAP (TONS):  0

TOWER MFG:   
# OF TOWER FANS:  0  
TOWER FAN V:  0  
TOWER FAN AMPS:  0  
TOWER FAN HP:  0

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N

TEMP LITE HI: ☐ N

OTHER INDICATIONS:

PRESS LITE LOW: ☐ N

TEMP LITE LOW: ☐ N

PRESS GAUGES: ☐ N

TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: CWP-1

PUMP HP: 7.5

PUMP MFG: GOULD

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: 6330778-03

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="11"/>	<input type="text" value="11"/>	<input type="text" value="11"/>	<input type="text" value="11"/>	<input type="text" value="11"/>	<input type="text" value="10"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	6910	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	AHU-1 NORTH, AHU-2 SOUTH
		% OF BLDG AREA HEATED:	50
AHU UNIT TYPE	OTHER	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,360	CFM-CLG:	1,360
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	CARRIER	UNIT MODEL:	58GP125
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED FURNACE: 125,000 BTUH		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	43	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	11	11	11	11	11	10					
REQ STOP:	0	22	22	22	22	22	22					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	75	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	75	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	Y
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6910

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: AHU-1 NORTH, AHU-2 SOUTH

% OF BLDG AREA HEATED: 50

AHU UNIT TYPE OTHER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,360

CFM-CLG: 1,360

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 58GR125

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 43

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	11	11	11	11	11	10
REQ STOP:	0	22	22	22	22	22	22

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 75

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 75

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 6910 BLDG NAME: EXC SP ST FAC  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38TG060510	# OF TOWER FANS:	1
CHILLER SERIAL NO:	3891E38107	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	1.6
CHILLER AMPS:	20.1	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 43 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	11	11	11	11	11	10
REQ STOP:	0	22	22	22	22	22	22

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 6910 BLDG NAME: EXC SP ST FAC  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38TG060510	# OF TOWER FANS:	1
CHILLER SERIAL NO:	3891E38107	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	1.6
CHILLER AMPS:	20.1	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	5		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 43 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	11	11	11	11	11	10
REQ STOP:	0	22	22	22	22	22	22

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/AMS/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="10"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>
REQ STOP:	<input type="text" value="19"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6914  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1, CH-2 SERVES AREA: MAIN SALES AREA  
% OF BLDG AREA HEATED: 51

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,100 CFM-CLG: 28,100  
MIN %OA: 57 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 20 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	HOT WATER	<input checked="" type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 60 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6914  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1, CH-2 SERVES AREA: OFFICE AREA  
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 CFM-CLG: 3,500  
MIN %OA: 17 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTEMP UNIT MODEL:  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: BALDOR RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6914  
AHU NUMBER: AHU-3  
AHU LOCATION: MEZZ ABOVE OFFICES  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: WAREHOUSE  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,380  
MIN %OA: 25

CFM-CLG: 0  
MAX %OA: 100

## NAMEPLATE

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 54  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 60  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6914

AHU NUMBER: AHU-4

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1, CH-2

SERVES AREA: SOUTH SHOPS

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 9,620

CFM-CLG: 9,620

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6914  
AHU NUMBER: AHU-5 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: CH-1, CH-2 SERVES AREA: NORTH SERVICES SHOPS  
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 6,790 CFM-CLG: 6,790  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTEMP UNIT MODEL: BD15  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: CF213TTDR702 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 6914

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: OSAGE

UNIT MODEL: 3-5-350

BLR CAP OUTPUT (BTUH):

1,600,000

BLR CAP INPUT (BTUH):

2,000,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 54

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 5

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: CVH184TTDR2026

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/AMS/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 6914

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 54

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 5

PUMP MFG: LEESON

PUMP SERVICE: HW PUMP

PUMP MODEL: N184117DBIA



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 6914 BLDG NAME: EXC MAIN RETL  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,4,5  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	
CHILLER MODEL:	6DK1-3500-TSK	# OF TOWER FANS:	16
CHILLER SERIAL NO:	88H75879	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	125	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	127		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATORS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	7.5	PUMP MFG:	LINCOLN
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	TV-2996

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/AMS/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 6914 BLDG NAME: EXC MAIN RETL  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,4,5  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	COPELAMETIC	TOWER MFG:	
CHILLER MODEL:	6DK1-3500-TSK	# OF TOWER FANS:	16
CHILLER SERIAL NO:	88H75879	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	125	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	127		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 7.5 PUMP MFG: LINCOLN  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: TV-2996

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 6918

BLDG NAME: SKILL DEV CTR

ELECTRIC METER: ☒ Y

**CONDITIONED SQFT:** 11,507

**GAS METER:** N

SUSPECT ACM: N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 20

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918  
AHU NUMBER: AHU-1  
AHU LOCATION: WOODSHOP MER  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: WOOD SHOP  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000  
MIN %OA: 20  
CFM-CLG: 4,000  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: TRAVEL CENTER

% OF BLDG AREA HEATED: 5.5

AHU UNIT TYPE RESIDENTIAL FURNACE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,400

CFM-CLG: 1,400

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918  
AHU NUMBER: AHU-3  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: TRAVEL CENTER  
% OF BLDG AREA HEATED: 5.5

AHU UNIT TYPE RESIDENTIAL FURNACE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,400  
MIN %OA: 15  
CFM-CLG: 1,400  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918  
AHU NUMBER: MUA-1 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: SERVES AREA: WOOD SHOP  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,000  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: STERLING UNIT MODEL: RT-350-BM  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: WESTINGHOUSE RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: SH311P414 RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6918  
AHU NUMBER: RTU-1  
AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU:   
SERVES AREA:   
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE CHILLER/FURNACE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000  
MIN %OA: 15  
CFM-CLG: 4,000  
MAX %OA: 100

## NAMEPLATE

UNIT MFG: LENNOX  
UNIT MODEL: GCS11-1353-230A  
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED FURNACE

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 20  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918

AHU NUMBER: RTU-2

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU:

SERVES AREA:

% OF BLDG AREA HEATED: 12

AHU UNIT TYPE CHILLER/FURNACE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,920

CFM-CLG: 1,920

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: LENNOX

UNIT MODEL: GCS9-513-120A-Z

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0.25

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	6918	AHU LOCATION:	ROOF
AHU NUMBER:	RTU-3		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	
		% OF BLDG AREA HEATED:	12
AHU UNIT TYPE	CHILLER/FURNACE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,920	CFM-CLG:	1,920
MIN %OA:	15	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	LENNOX	UNIT MODEL:	GCS9-513-120A-Z
SUPPLY FAN HP:	0.75	RET/EXH FAN HP:	0.25
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED FURNACE		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	20	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	9	9	0					
REQ STOP:	0	17	17	17	21	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:			
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIPT:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918  
AHU NUMBER: RTU-4 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: SERVES AREA:  
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE CHILLER/FURNACE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,920 CFM-CLG: 1,920  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: LENNOX UNIT MODEL: GCS9-513-120A-Z  
SUPPLY FAN HP: 0.75 RET/EXH FAN HP: 0.25  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6918  
AHU NUMBER: RTU-5 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: SERVES AREA:  
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE CHILLER/FURNACE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000 CFM-CLG: 4,000  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: LENNOX UNIT MODEL: GCS11-1353-230A  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 20 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	21	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: ☐ MIXED AIR DMPR CONTROL: ☐ IMPLEMENT DEMAND LIMIT CNTRLS? ☐  
MAX OA DMPR CONTROL: ☐ ECONOMIZER DB CONTROL: ☐ TIME CLOCK: ☐  
RET AIR DMPR CONTROL: ☐ ECONOMIZER WB CONTROL: ☐ TIME CLOCK OPERATIONAL? ☐  
EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 6940

BLDG NAME: INDOOR SWIM POOL

ELECTRIC METER: N

CONDITIONED SQFT: 23,347

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 59

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6940  
AHU NUMBER: HRU-1  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: SWIMMING POOL  
% OF BLDG AREA HEATED: 77

AHU UNIT TYPE HEAT RECOVERY UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 24,800  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 15  
RET/EXH FAN HP: 15  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 59  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 74  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: Y  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y  
ECONOMIZER DB CONTROL: N  
TIME CLOCK: N  
RET AIR DMPR CONTROL: Y  
ECONOMIZER WB CONTROL: N  
TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: HUMIDITY SENSORS ON OA AND RA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 6940

AHU NUMBER: HV-2

AHU LOCATION: LOCKER RMS/STORAGE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: LOCKER ROOMS/ STORAGE

% OF BLDG AREA HEATED: 23

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 59

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 75

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: CONTROLS IN POOR CONDITION

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 6940

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 3-5-350

BLR CAP OUTPUT (BTUH): 2,240,000

BLR CAP INPUT (BTUH): 2,800,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 59

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: M3155T

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 6940

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE HEATING

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

59

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 1

PUMP MFG: BELL &amp; GOSSETT

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7017  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: ACCU-1 SERVES AREA: ALL  
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,250 CFM-CLG: 3,250  
MIN %OA: 25 MAX %OA: 25

**NAMEPLATE**

UNIT MFG: YORK STELLAR UNIT MODEL: G/UA0605A  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: P3UCD2QN09101 RET/EXH FAN MTR MODEL:  
COMMENTS: GAS - FIRED FURNANCE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NAT GAS	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: DUAL SETPOINT  
PRESENT TEMP WINTR OCC: 72 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 72 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7017 BLDG NAME: BN HQ BLDG  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	YORK	TOWER MFG:	
CHILLER MODEL:	HIDA06050613	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.25
CHILLER PH:	1		
CHILLER CAP (TONS):	8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 30 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="9"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="9"/>
REQ STOP:	<input type="text" value="19"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="19"/>

**REMARKS:**

SUSPECT ACEM LOCATED ON PIPEFITTINGS AND HW STORAGE TANK

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024

AHU NUMBER: FC-1

AHU LOCATION: WOMEN AND MENS SHOWER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SHOWERS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.12

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 62

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024

AHU NUMBER: FC-2

AHU LOCATION: WOMEN AND MENS SHOWER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SHOWER

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.12

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 62

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7024  
AHU NUMBER: HV-1 AHU LOCATION: CEILING  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: GYMNASIUM  
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

## NAMEPLATE

UNIT MFG: SUPPLY FAN HP: 1.5  
SUPPLY FAN MTR MFG: SUPPLY FAN MTR MODEL:  
COMMENTS: UNIT MODEL: RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG: RET/EXH FAN MTR MODEL:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 42 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024

AHU NUMBER: HV-2

AHU LOCATION: CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CVWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024  
AHU NUMBER: HV-3  
AHU LOCATION: CEILING  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: GYMNASIUM  
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024  
AHU NUMBER: HV-4  
AHU LOCATION: CEILING  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: GYMNASIUM  
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42  
MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024  
AHU NUMBER: HV-5 AHU LOCATION: CEILING  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: GYMNASIUM  
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: SUPPLY FAN HP: 1.5  
SUPPLY FAN MTR MFG: SUPPLY FAN MTR MODEL:  
COMMENTS: UNIT MODEL: RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG: RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7024

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

#### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:

☐

#### CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM  
UNIT MODEL: 4FL-277-40-G-PF-LB

BLR CAP OUTPUT (BTUH): 2,318,000  
BLR CAP INPUT (BTUH): 2,898,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 42

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 12 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7024

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒**BOILER**

BOILER TAG: BLR-2

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: AMERICAN STD.

UNIT MODEL: G-66

BLR CAP OUTPUT (BTUH): 520,000

BLR CAP INPUT (BTUH): 650,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 42

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 9 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

**EMC NO:** 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7028

BLDG NAME: BN CLASSROOMS

ELECTRIC METER: N

**CONDITIONED SQFT:** 3,733

**GAS METER:** N

SUSPECT ACM: ☐ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 27

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7028  
AHU NUMBER: FC-1  
AHU LOCATION: THROUGHOUT BLDG.  
REFRIG SYS # SRVNG AHU: CENTRAL PLANT  
SERVES AREA: ALL  
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE FAN COILS - 2 PIPE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,400  
MIN %OA: 0  
CFM-CLG: 4,400  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: TOTAL FOR 11 FAN COILS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 27  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 70  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7028

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-63-40-LB

BLR CAP OUTPUT (BTUH):

527,000

BLR CAP INPUT (BTUH):

659,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

27

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.16

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL: 8-350320-01

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7028

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

27

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7031

BLDG NAME: BN HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 3,733

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 27

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7031

AHU NUMBER: FC-1

AHU LOCATION: THROUGHOUT BLDG.

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,400

CFM-CLG: 4,400

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: UNITRANE

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: TOTAL FOR 11 FAN COILS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 27

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7031

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE:



CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: BURNHAM

UNIT MODEL: FD/12

BLR CAP OUTPUT (BTUH):

381,000

BLR CAP INPUT (BTUH):

528,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

27

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7031

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

27

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 0.75

PUMP MFG: BALDOR

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

SUSPECT ACM LOCATED ON PIPE FITTINGS

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7033  
AHU NUMBER: AHU-1  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CENTRAL PLANT  
SERVES AREA: ALL  
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,400  
MIN %OA: 15  
CFM-CLG: 4,400  
MAX %OA: 100

## NAMEPLATE

UNIT MFG: DUNHAM/BUSH  
UNIT MODEL: HAH040  
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: BALDOR  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: M3157T  
RET/EXH FAN MTR MODEL:  
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	STEAM	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 38  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: DUAL SETPOINT  
PRESENT TEMP WINTR OCC: 75  
PRESENT TEMP WINTR UNOCC: 55  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 55  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: Y  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7033

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: HB SMITH  
UNIT MODEL: G300-S/W-5 CON

BLR CAP OUTPUT (BTUH): 229,000  
BLR CAP INPUT (BTUH): 299,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 38

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:

☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1 PUMP HP: 0.16  
PUMP SERVICE: HW PUMP

PUMP MFG:   
PUMP MODEL:

**HW PUMP**

PUMP TAG: 2 PUMP HP: 0.16  
PUMP SERVICE: HW PUMP

PUMP MFG:   
PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7034

BLDG NAME: CLINIC W/O BEDS

ELECTRIC METER: N

CONDITIONED SQFT: 3,842

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7034

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 3,720

CFM-CLG: 3,720

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 39EB08

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7034

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: K-5007BI

BLR CAP OUTPUT (BTUH): 281,000

BLR CAP INPUT (BTUH): 468,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 15 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7036

BLDG NAME: REGIMENTAL HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 10,010

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 27

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7036

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: BASEMENT

% OF BLDG AREA HEATED: 28

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,787

MIN %OA: 0

CFM-CLG: 1,787

MAX %OA: 50

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: DV6S

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 27

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC:

HOT DECK DEG F:

PRESENT TEMP WINTR UNOCC:

COLD DECK DEG F:

PRESENT TEMP SUM OCC:

MIXED AIR DEG F:

PRESENT TEMP SUM UNOCC:

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F:

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7036	AHU LOCATION:	ALL
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	1ST FLOOR
		% OF BLDG AREA HEATED:	36
AHU UNIT TYPE	FAN COILS - 4 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	10,100	CFM-CLG:	10,100
MIN %OA:	0	MAX %OA:	0

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.75	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 27 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	OTHER
PRESENT TEMP WINTR OCC:		HOT DECK DEG F:	
PRESENT TEMP WINTR UNOCC:		COLD DECK DEG F:	
PRESENT TEMP SUM OCC:		MIXED AIR DEG F:	
PRESENT TEMP SUM UNOCC:		OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7036	AHU LOCATION:	ALL
AHU NUMBER:	FC-2		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	2NF FLOORS
		% OF BLDG AREA HEATED:	36
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	10,100	CFM-CLG:	10,100
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.75	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	27	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	18	18	18	18	18	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	
PRESENT TEMP WINTR OCC:		HOT DECK DEG F:	
PRESENT TEMP WINTR UNOCC:		COLD DECK DEG F:	
PRESENT TEMP SUM OCC:		MIXED AIR DEG F:	
PRESENT TEMP SUM UNOCC:		OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7036

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: FD119

BLR CAP OUTPUT (BTUH): 591,000

BLR CAP INPUT (BTUH): 864,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 27

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: LEESON

PUMP SERVICE: HW PUMP

PUMP MODEL: C6T17FK5B

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

**DATE:** 10/13/94

PREPARED BY: AJN/CWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7046

BLDG NAME: BN CLASSROOMS

ELECTRIC METER: N

**CONDITIONED SQFT:** 3,733

**GAS METER:** N

SUSPECT ACM: N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 27

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7046

AHU NUMBER: FC-1

AHU LOCATION: TROUGHOUT BLDG.

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,400

CFM-CLG: 4,400

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: UNITRANE

SUPPLY FAN HP: 0.18

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 27

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7046

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM

UNIT MODEL: FD/12

BLR CAP OUTPUT (BTUH):

381,000

BLR CAP INPUT (BTUH):

528,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 27

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 135 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.08

PUMP MFG:

ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7046

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: FC'S

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

27

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

1.5

PUMP MFG:

PUMP SERVICE: DTWP PUMP (DUAL TEMP WATER)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7047

BLDG NAME: BN HQ BLDG

ELECTRIC METER: ☐ N

CONDITIONED SQFT: 3,733

GAS METER: ☐ YSUSPECT ACM: ☐ N**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 38

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7047

AHU NUMBER: FC-1

AHU LOCATION: THROUGHOUT BLDG.

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,400

CFM-CLG: 4,400

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: UNITRANE

SUPPLY FAN HP: 0.18

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 38

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7047

BOILER RM LOCATION: MER

### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: FD/12

BLR CAP OUTPUT (BTUH): 381,000

BLR CAP INPUT (BTUH): 528,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 38

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7047

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 38

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: ☒ N

DEG F or PSIG

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.5

PUMP MFG: DAYTON

PUMP SERVICE: DTW PUMP

PUMP MODEL: 5K342G

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7048 BLDG NAME: BN HQ BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 2,604

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 30

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7048	AHU LOCATION:	THROUGHOUT BLDG
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	ALL
		% OF BLDG AREA HEATED:	100
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	3,600	CFM-CLG:	3,600
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	TRANE	UNIT MODEL:	RB12A008
SUPPLY FAN HP:	0.67	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MAGNETEK	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	HE4E004N	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	30	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	18	18	18	18	18	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7048

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



#### CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM

UNIT MODEL: 806B-W

BLR CAP OUTPUT (BTUH): 257,400

BLR CAP INPUT (BTUH): 330,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 30

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7048

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

30

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: ☐ N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 0.75

PUMP MFG: MARATHON

PUMP SERVICE: DTW PUMP

PUMP MODEL: VQJ56B17079D

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="6"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="6"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

AHU NUMBER: AHU-1

AHU LOCATION: KITCHEN

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: DINING HALL

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,330

CFM-CLG: 7,330

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: BALDOR

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 57

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 57

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

AHU NUMBER: HV-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: N/A

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

8

BOILER MFG: KEWANEE

UNIT MODEL: KW-40-192-G

BLR CAP OUTPUT (BTUH):

1,749,000

BLR CAP INPUT (BTUH):

2,186,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 185 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

☒**BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

8

BOILER MFG: KEWANEE

UNIT MODEL: KW-40-192-G

BLR CAP OUTPUT (BTUH): 1,749,000

BLR CAP INPUT (BTUH): 2,186,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 185 DEG F or PSIG

TYPE OF BURNER CONTROLS: ALL

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: KITCHEN

☒ **BOILER**

BOILER TAG: BLR-3

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: KS-40-166-G

BLR CAP OUTPUT (BTUH): 1,204,800

BLR CAP INPUT (BTUH): 1,506,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 23

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: DHW

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-4

BOILER TYPE:

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: TELEDYNE

UNIT MODEL: PW1200IN09CIA

BLR CAP OUTPUT (BTUH):

972,000

BLR CAP INPUT (BTUH):

1,200,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DHW-1

PUMP HP: 0.167

PUMP MFG: MARATHON ELECTRIC

PUMP SERVICE: DHW

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: KITCHEN

☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE: BLR-3



CENTRAL PLANT DIRECT

**NAMEPLATE**% AREA HEATED BY BB RADIATION:  0BOILER MFG: UNIT MODEL: BLR CAP OUTPUT (BTUH): 

900,000

BLR CAP INPUT (BTUH): 

900,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 23

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS: RESET CONTROLS:  NOPERATING SETPOINT: 

0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: OTHER

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE: BLR-1 &amp; BLR-2



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: UNIMOUNT 1;25

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: F040 TYPE: UT

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: UNIMOUNT

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7050	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, LATRINES
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	8

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	UNIMOUNT
				PUMP MODEL:	F012A TYPE UT

**SCHEDULE**

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3 WAY VALVE IN MER



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7053

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

8

BOILER MFG: KEWANEE

UNIT MODEL: KW-40-192-G

BLR CAP OUTPUT (BTUH): 1,749,000

BLR CAP INPUT (BTUH): 2,186,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 185 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7053

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

8

BOILER MFG: KEWANEE

UNIT MODEL: KW-40-192-G

BLR CAP OUTPUT (BTUH):

1,749,000

BLR CAP INPUT (BTUH):

2,186,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 185 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7053

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒☐ BOILER

BOILER TAG: BLR-3

BOILER TYPE:

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: TELEDYNE LAARS

UNIT MODEL: PW075 IN09CIA

BLR CAP OUTPUT (BTUH): 579,150

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DHW-1

PUMP HP: 0.17

PUMP MFG: MARATHON

PUMP SERVICE: DHW

PUMP MODEL:

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 0.33

PUMP MFG: BOILER PUMP

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7053

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☒☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE: BLR-1, BLR-2

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

0

BLR CAP INPUT (BTUH):

0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: UNIMOUNT 1;25

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: F040 TYPE: UT

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7053

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: UNIMOUNT

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: F040 TYPE: UT

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7053	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES/LATRINES
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	8

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	UNIMOUNT
				PUMP MODEL:	F012A TYPE: UT

### SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	N
CONTROL COMMENTS:	3 WAY VALVE IN MER

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7086

BLDG NAME: UNIT CHAPEL

ELECTRIC METER: N

CONDITIONED SQFT: 8,696

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 35

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	0	0	0	0	0	10
REQ STOP:	14	0	0	0	0	0	13

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7086

AHU NUMBER: AHU-1

AHU LOCATION: MER BASEMENT

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: SANCTUARY

% OF BLDG AREA HEATED: 67

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,400

MIN %OA: 30

CFM-CLG: 5,400

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 35

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	0	0	0	0	0	10
REQ STOP:	14	0	0	0	0	0	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: Face &amp; Bypass dampers

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7086

AHU NUMBER: FC-1

AHU LOCATION: THROUGHOUT OFFICE AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: ADMIN OFFICE

% OF BLDG AREA HEATED: 33

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,300

CFM-CLG: 3,300

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: MODINE

UNIT MODEL: CS90

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 34

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: 3 speed fan switch on FCs.

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7086

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: EW-30-G-PF

BLR CAP OUTPUT (BTUH): 907,000

BLR CAP INPUT (BTUH): 1,308,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 34

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 172 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7086

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:**

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: DTWP-1 BOILER TYPE: FUEL TYPE:	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**DAYS SCHEDULE NO: 34 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

**HW PUMP**PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: 8-164733-20**HW PUMP**PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7086

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

34

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP:

0.75

PUMP MFG:

BELL & GOSSETT

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

MOT 148-8

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7086 BLDG NAME: UNIT CHAPEL  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CD20S	# OF TOWER FANS:	4
CHILLER SERIAL NO:	6-86-11606-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.4
CHILLER AMPS:	44.8	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	20		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 35 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	0	0	0	0	0	10
REQ STOP:	14	0	0	0	0	0	13

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐  
PRESS LITE LOW: ☐  
PRESS GAUGES: ☐

TEMP LITE HI: ☐  
TEMP LITE LOW: ☐  
TEMP GAUGES: ☐

OTHER INDICATIONS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7086 BLDG NAME: UNIT CHAPEL  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): MER  
AHU'S SERVED: FC-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	TSI
CHILLER MODEL:	9RC1-1010	# OF TOWER FANS:	1
CHILLER SERIAL NO:	STC 82A -01421	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.4
CHILLER AMPS:	42.8	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	10		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 34 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 40  
CWR SETPOINT: 50

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7108

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: Y

CONDITIONED SQFT: 12,527

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 3

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7108

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: C. PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 8

CFM-HTG: 7,820

CFM-CLG: 7,820

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 39EB17

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 3

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7108

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☒ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE: OTHER

FUEL TYPE: OTHER

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

BLR CAP OUTPUT (BTUH): 0

UNIT MODEL:

BLR CAP INPUT (BTUH): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 3

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1 PUMP HP: 1

PUMP MFG: MARATHON ELEC.

PUMP SERVICE: HW PUMP

PUMP MODEL: RVW143TTDR5326AA

**HW PUMP**

PUMP TAG: 2 PUMP HP: 1

PUMP MFG: MARATHON ELEC.

PUMP SERVICE: HW PUMP

PUMP MODEL: RVN143TTDR5326AA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7108

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CWP-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1

UNIT TYPE OTHER

**NAMEPLATE**

CHILLER MFG:

TOWER MFG:

CHILLER MODEL:

# OF TOWER FANS:

CHILLER SERIAL NO:

TOWER FAN V:

CHILLER V:

TOWER FAN AMPS:

CHILLER AMPS:

TOWER FAN HP:

CHILLER PH:

CHILLER CAP (TONS):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

3

MONTHS SCHEDULE NO:

2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: RV143TT0R5326AA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7109	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	ALL
		% OF BLDG AREA HEATED:	100
AHU UNIT TYPE	VAV W/ REHEAT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	16,950	CFM-CLG:	16,950
MIN %OA:	0	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	CARRIER	UNIT MODEL:	39ED17
SUPPLY FAN HP:	10	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	CENTURY	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	6-330779-04	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	30	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	18	18	18	18	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRONIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	Y	TIME CLOCK:	Y
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	Y
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7109

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX

UNIT MODEL: WGFD-2750

BLR CAP OUTPUT (BTUH): 2,750,000

BLR CAP INPUT (BTUH): 3,437,500

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 30

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 170 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: MARARHTON

PUMP SERVICE: HW PUMP

PUMP MODEL: SVE145TTDR4653AA

### HW PUMP

PUMP TAG: 2

PUMP HP: 0

PUMP MFG: 1.5 HP - MARATHON

PUMP SERVICE: HW PUMP - STANDBY

PUMP MODEL: SVE145TTDR4653AA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7109

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 30

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: SVC143TTDR5326AA

**HW PUMP**

PUMP TAG: HWP-2

PUMP HP: 1

PUMP MFG: 1 HP - MARATHON

PUMP SERVICE: HW PUMP - STANDBY

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7109

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 30HS080D500  
CHILLER SERIAL NO: S634597  
CHILLER V: 108  
CHILLER AMPS: 334  
CHILLER PH: 3  
CHILLER CAP (TONS): 80

TOWER MFG: CARRIER  
# OF TOWER FANS: 6  
TOWER FAN V: 200  
TOWER FAN AMPS: 4.6  
TOWER FAN HP: 0.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 30  
SCHEDULE COMMENTS:

MONTHS SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CWP-1 PUMP HP: 2  
PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MFG: MARATHON  
PUMP MODEL: SVE145TTDR5331AA

**CW and CNW PUMPS**

PUMP TAG: PUMP HP:  
PUMP SERVICE:

PUMP MFG:  
PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7109 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: ALL  
UNIT TYPE

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 30 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ TEMP LITE HI: ☐  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐  
OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: CWP-1 PUMP HP: 7.5 PUMP MFG: MARATHON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: SVC213TTDR7026GPL

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7109

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CWP-2

LOCATION (MER#): MER

AHU'S SERVED: ALL

UNIT TYPE

**NAMEPLATE**

CHILLER MFG:

CHILLER MODEL:

CHILLER SERIAL NO:

CHILLER V:

CHILLER AMPS:

CHILLER PH:

CHILLER CAP (TONS):

TOWER MFG:

# OF TOWER FANS:

TOWER FAN V:

TOWER FAN AMPS:

TOWER FAN HP:

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

30

MONTHS SCHEDULE NO:

2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CWP-2

PUMP HP: 7.5

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: SVC213TTDR7026GPL

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/9/94

PREPARED BY: CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="8"/>	<input type="text" value="9"/>	<input type="text" value="12"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="15"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

SUSPECT ACM LOCATED ON ALL STEAM AND CONDENSATE PIPE

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/9/94  
PREPARED BY: CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7176  
AHU NUMBER: UH-1 AHU LOCATION: CEILING MOUNTED  
REFRIG SYS # SRVNG AHU: SERVES AREA: ALL  
% OF BLDG AREA HEATED: 22

AHU UNIT TYPE: UNIT HEATER NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,250 CFM-CLG: 0  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: MODINE UNIT MODEL:  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: TOTAL FOR 5 UHS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 7 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/9/94

PREPARED BY: CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7176

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: NATIONAL RADIATOR

UNIT MODEL: 6-66

BLR CAP OUTPUT (BTUH): 1,000,000

BLR CAP INPUT (BTUH): 1,250,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 7

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME:EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #:DACA 01-94-D-0033  
LOCATION:FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/09/94

**PREPARED BY: AJN/CWW**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7178

**BLDG NAME:** MOTOR POOL ADMIN

ELECTRIC METER: N

**CONDITIONED SQFT:** 2,480

**GAS METER:** N

SUSPECT ACM: **N**

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 7

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/09/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7178

AHU NUMBER: UH-1

AHU LOCATION: CEILING MOUNTED

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICES/SHOP

% OF BLDG AREA HEATED: 50

AHU UNIT TYPE GAS FIRED UH

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 600

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DAYTON FUEL TRIMMER

UNIT MODEL: 3E368A

SUPPLY FAN HP: 0.08

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: BTUH INPUT: 75,000; BTU OUTPUT: 60750

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 7

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/09/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7178	AHU LOCATION:	CEILING MOUNTED
AHU NUMBER:	UH-2		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	OFFICES/SHOP
		% OF BLDG AREA HEATED:	50
AHU UNIT TYPE		NUMBER OF ZONES IF MZ UNIT:	
GAS FIRED UH		0	
CFM-HTG:	600	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	EM	UNIT MODEL:	UH-1100-1-FSP
SUPPLY FAN HP:	0.08	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 7 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	74	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7210 BLDG NAME: CH CHILLER PLANT  
ELECTRIC METER: N  
GAS METER: Y  
SUSPECT ACM: N  
CONDITIONED SQFT: 4,320

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7210

BLDG NAME: CH CHILLER PLANT

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE CENTRIFUGAL WITH COOLING TOWER-CHW

**NAMEPLATE**

CHILLER MFG: TRANE CENTRAVAC  
CHILLER MODEL: PCV-SF-CIDI  
CHILLER SERIAL NO: L4E17783  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 504

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 460  
TOWER FAN AMPS: 48.5  
TOWER FAN HP: 40

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☒ Y  
PRESS LITE LOW: ☒ N  
PRESS GAUGES: ☒ N

TEMP LITE HI: ☒ N  
TEMP LITE LOW: ☒ Y  
TEMP GAUGES: ☒ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CW-1 PUMP HP: 125  
PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MFG: MARATHON  
PUMP MODEL: 405TSTD7026DDW

**CW and CNW PUMPS**

PUMP TAG: CNW-1 PUMP HP: 50  
PUMP SERVICE: COND WATER PUMP (CNW)

PUMP MFG: GE  
PUMP MODEL: 5K6248XH4A

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7210

BLDG NAME: CH CHILLER PLANT

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE CENTRIFUGAL WITH COOLING TOWER- CHW

**NAMEPLATE**

CHILLER MFG: YORK  
CHILLER MODEL: YTJ3K3E2-CS-FS  
CHILLER SERIAL NO:  
CHILLER V: 2300  
CHILLER AMPS: 120  
CHILLER PH: 3  
CHILLER CAP (TONS): 504

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 40

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CNW-1

PUMP HP: 50

PUMP MFG: GE

PUMP SERVICE: COND WATER PUMP (CNW)

PUMP MODEL: 5K6248XH4A

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7210

BLDG NAME: CH CHILLER PLANT

REF. UNIT NUMBER/TAG: CNWP-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: CH-I

UNIT TYPE

**NAMEPLATE**

CHILLER MFG:

TOWER MFG:

CHILLER MODEL:

# OF TOWER FANS: 0

CHILLER SERIAL NO:

TOWER FAN V: 0

CHILLER V: 0

TOWER FAN AMPS: 0

CHILLER AMPS: 0

TOWER FAN HP: 0

CHILLER PH: 0

CHILLER CAP (TONS): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 75

PUMP MFG: GE

PUMP SERVICE: COND WATER PUMP (CNW)

PUMP MODEL: 5K6248XH4A

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7212

BLDG NAME: CO HQ BLDG

ELECTRIC METER: Y

CONDITIONED SQFT: 19,320

GAS METER: N

SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 14

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	19	19	19	19	19	0

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7212  
AHU NUMBER: FC-1  
AHU LOCATION: ABOVE CEILING  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: ADMIN  
% OF BLDG AREA HEATED: 37

AHU UNIT TYPE FAN COILS - 2 PIPE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,200  
MIN %OA: 20  
CFM-CLG: 7,200  
MAX %OA: 20

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 14  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	19	19	19	19	19	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7212	AHU LOCATION:	STORAGE AREA
AHU NUMBER:	HV-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	STORAGE
		% OF BLDG AREA HEATED:	15.8
AHU UNIT TYPE	HEATING AND VENTILATING	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	2,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HW	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	14	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	19	19	19	19	19	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7212

AHU NUMBER: HV-2

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HW	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 17

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	7	7	7	7	7	10
REQ STOP:	13	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7212	AHU LOCATION:	STORAGE AREA
AHU NUMBER:	HV-3		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	STORAGE
		% OF BLDG AREA HEATED:	15.8
AHU UNIT TYPE	HEATING AND VENTILATING		
	NUMBER OF ZONES IF MZ UNIT: 0		
CFM-HTG:	2,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	14	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	19	19	19	19	19	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7212

AHU NUMBER: HV-4

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 14

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	19	19	19	19	19	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7212

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: OTHER

<input type="checkbox"/> <b>BOILER</b> BOILER TAG: HWP-1 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input checked="" type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:   
UNIT MODEL:   
COMMENTS:   
BLR CAP OUTPUT (BTUH): 0  
BLR CAP INPUT (BTUH): 0

#### SCHEDULE

DAYS SCHEDULE NO: 14 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	19	19	19	19	19	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
RESET CONTROLS: N  
CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: HWP-1 PUMP HP: 5 PUMP MFG: MARATHON ELECTRIC  
PUMP SERVICE: HW PUMP PUMP MODEL: PVD184TTDP762ACL

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7212 BLDG NAME: CO HQ BLDG  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: FAN COILS  
UNIT TYPE CENTRAL PLANT

**NAMEPLATE**

CHILLER MFG: CHILLER MODEL: CHILLER SERIAL NO:  
CHILLER V: 0 CHILLER AMPS: 0 CHILLER PH: 0  
CHILLER CAP (TONS): 0  
TOWER MFG: # OF TOWER FANS: 0  
TOWER FAN V: 0 TOWER FAN AMPS: 0  
TOWER FAN HP: 0  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 14 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	19	19	19	19	19	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: US ELECTRIC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: A DP DESIGN B CODE K

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: ajn/cww

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7215

BLDG NAME: BN HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 2,604

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: ajn/cww

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7215  
AHU NUMBER: AHU-1  
AHU LOCATION: MEDICAL SUPPLY  
REFRIG SYS # SRVNG AHU: 1  
SERVES AREA: ALL  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0  
CFM-CLG: 3,250  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: HEATWAVE  
UNIT MODEL: AH-75  
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: PAKCAGE UNIT  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4  
MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: ajn/cww

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7215

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**  
BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**  
CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: CRANE  
UNIT MODEL: 257NS

BLR CAP OUTPUT (BTUH): 206,400  
BLR CAP INPUT (BTUH): 258,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 4 MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 170 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: ajn/cww

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7215	BLDG NAME:	BN HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	ENTIRE BUILDING
SOURCE OF HEATING:		SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.08	PUMP MFG:	
				PUMP MODEL:	

**SCHEDULE**

DAYS SCHEDULE NO:	4	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	ELECTRIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: ajn/cww

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7215 BLDG NAME: BN HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	HEATWAVE	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	2.3
CHILLER AMPS:	33.5	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

**DATE:** 10/6/94

**PREPARED BY: AJN/AMS/DEJ**

## **BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7218

BLDG NAME: BN HQ BLDG

ELECTRIC METER: ☒ Y

**CONDITIONED SQFT:** 12,625

**GAS METER:** Y

SUSPECT ACM: ☒ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7218

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 8

CFM-HTG: 7,820

CFM-CLG: 7,820

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: BOHN

UNIT MODEL: HMZ17ACF

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: TVL21377OR7026

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/AMS/DEJ

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7218

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: AJAX

UNIT MODEL: WGED-525

BLR CAP OUTPUT (BTUH):

420,000

BLR CAP INPUT (BTUH):

525,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

11

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.5

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: 35E816-72

**HW PUMP**

PUMP TAG: 2

PUMP HP:

0.5

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: 35E816-72

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/AMS/DEJ

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7218

BLDG NAME: BN HQ BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI

CHILLER MODEL: 33ADC530

CHILLER SERIAL NO: 12-87-12594

CHILLER V: 208

CHILLER AMPS: 96

CHILLER PH: 3

CHILLER CAP (TONS): 30

TOWER MFG: LMC

# OF TOWER FANS: 4

TOWER FAN V: 0

TOWER FAN AMPS: 0

TOWER FAN HP: 0.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: US ELEC.

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: 8020/PC2N329R088F

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/31\*94

PREPARED BY: DJ/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7220

BLDG NAME: CO HQ BLDG

ELECTRIC METER: Y

CONDITIONED SQFT: 18,870

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 5

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/31\*94  
PREPARED BY: DJ/AJN

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7220	AHU LOCATION:	ABOVE CEILING
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	ADMIN
		% OF BLDG AREA HEATED:	37
AHU UNIT TYPE	2 PIPE FC	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	7,200	CFM-CLG:	7,200
MIN %OA:	20	MAX %OA:	20

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	5	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
		TIME CLOCK:	Y
		TIME CLOCK OPERATIONAL?	N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/31\*94

PREPARED BY: DJ/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7220

AHU NUMBER: HV-1

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILLATION

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/31\*94

PREPARED BY: DJ/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7220

AHU NUMBER: HV-2

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

MIN %OA: 100

CFM-CLG: 0

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/31\*94

LOCATION: FT. RILEY, KS

PREPARED BY: DJ/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7220

AHU NUMBER: HV-3

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/31\*94

LOCATION: FT. RILEY, KS

PREPARED BY: DJ/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7220

AHU NUMBER: HV-4

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: STORAGE

% OF BLDG AREA HEATED: 15.8

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/31\*94  
PREPARED BY: DJ/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7220

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HIGH TEMP HW (ABOVE 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM  
UNIT MODEL: FS/30

BLR CAP OUTPUT (BTUH): 1,062,000  
BLR CAP INPUT (BTUH): 1,327,500

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 5

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 150 DEG F or PSIG  
TYPE OF BURNER CONTROLS: OTHER  
CONTROLS COMMENTS: FD

RESET CONTROLS: N

#### HW PUMP

PUMP TAG: 2 PUMP HP: 5 PUMP MFG: US ELECTRIC  
PUMP SERVICE: HW PUMP PUMP MODEL: F-B030-00-001

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/31\*94  
PREPARED BY: DJ/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7220

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

5

MONTH SECHDULE NO:

2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

RESET CONTROLS:

N

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-2

PUMP HP:

3

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F-B028-01-288

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/31\*94  
PREPARED BY: DJ/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7220

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: HWP-1 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:  
UNIT MODEL:

BLR CAP OUTPUT (BTUH): 0  
BLR CAP INPUT (BTUH): 0

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 5

MONTH SECHDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
CONTROLS COMMENTS:

RESET CONTROLS: N

#### HW PUMP

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: US ELECTRIC  
PUMP SERVICE: HW PUMP PUMP MODEL: F-B028-01-288

#### HW PUMP

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/31\*94  
PREPARED BY: DJ/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7220 BLDG NAME: CO HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FC  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	SNYDER GENERAL	TOWER MFG:	
CHILLER MODEL:	ALP070C	# OF TOWER FANS:	4
CHILLER SERIAL NO:	5XB0185700	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	278	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	65		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	40	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: US ELECTRIC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: F-B028-01-288

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7243 BLDG NAME: ADMIN & SUPPORT BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: Y  
CONDITIONED SQFT: 17,829

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:

Suspect ACM on pipe fittings for chilled water; HW piping has fiberglass insulation. At least one person in each of 6 Admin Support areas 24hr a day. 15 Friedrich AC units "Power Miser". In original building each storage area has one exhaust fan for ventilation. Perimeter radiation throughout original building. Addition building: storage area has large fan coil, Htg. only, no control valve, fan control only.



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CVVW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7243

AHU NUMBER: EF-1

AHU LOCATION: SUPPORT AREA

REFRIG SYS # SRVNG AHU: N/A

SERVES AREA: SUPORT AREA

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE EXH. FAN

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 14,975

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: Supply Fan HP represents 5 Exhaust Fans, one for each area.

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: Exhaust fans have gravity dampers

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CVWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7243	AHU LOCATION:	ABOVE CEILING
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	ADDITION ADMIN AREA
		% OF BLDG AREA HEATED:	7
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,800	CFM-CLG:	1,800
MIN %OA:	0	MAX %OA:	0

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	Total for 4 FC Units; Dual Temp.		

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	2	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	70	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	70	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				

OTHER CONTROLS DESCR: 3-way control valves in MER  
CONTROLS COMMENTS: Manual Occupied/ Unoccupied Switch

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7243

AHU NUMBER: H&amp;V-1

AHU LOCATION: SUPPORT AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPORT AREA ADDITION

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7243

AHU NUMBER: UH-1

AHU LOCATION: ADDITION STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: STORAGE ROOM

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 220

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.04

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7243

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:  
CONVERTER TYPE:  
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FW-127-50-16

BLR CAP OUTPUT (BTUH): 850,000

BLR CAP INPUT (BTUH): 1,063,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 105 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: ARMSTRONG

PUMP SERVICE: HW PUMP

PUMP MODEL: 1QA56B17D77H

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0.5

PUMP MFG: ARMSTRON

PUMP SERVICE: HW PUMP

PUMP MODEL: 1QA56B17D77H

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7243 BLDG NAME: ADMIN & SUPPORT BLDG  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: PERIMETER BLDG  
SOURCE OF HEATING: BLR-1 SERVES AREA: ORIG BLDG  
RADIATION UNIT TYPE: HW % AREA HTG: 78

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 0.5 PUMP MFG: BELL & GOSSETT  
PUMP MODEL:

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS: ELECTRIC CONTROL ON PUMPS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7243 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: FC-1  
UNIT TYPE CENTRAL PLANT

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	N	TEMP LITE HI:	N
PRESS LITE LOW:	N	TEMP LITE LOW:	N
PRESS GAUGES:	N	TEMP GAUGES:	N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	ARMSTRONG
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	1QA56B17D77H

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/9/94

PREPARED BY: CWW/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="6"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="6"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/9/94  
PREPARED BY: CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7245	AHU LOCATION:	MEZZ
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	DINNING
		% OF BLDG AREA HEATED:	35
AHU UNIT TYPE	VAV	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	7,000	CFM-CLG:	7,000
MIN %OA:	30	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	23	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	6	5	5	5	5	5	6					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input type="checkbox"/>	FEB: <input type="checkbox"/>	MAR: <input type="checkbox"/>	APR: <input type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input type="checkbox"/>	NOV: <input type="checkbox"/>	DEC: <input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/> N	MIXED AIR DMPR CONTROL:	<input type="checkbox"/> N
MAX OA DMPR CONTROL:	<input type="checkbox"/> Y	ECONOMIZER DB CONTROL:	<input type="checkbox"/> N
RET AIR DMPR CONTROL:	<input type="checkbox"/> Y	ECONOMIZER WB CONTROL:	<input type="checkbox"/> N
EXH AIR DMPR CONTROL:	<input type="checkbox"/> N	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/> N
		TIME CLOCK:	<input type="checkbox"/> N
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/> N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/9/94  
PREPARED BY: CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7245	AHU LOCATION:	MEZZ
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	DINNING
		% OF BLDG AREA HEATED:	35
AHU UNIT TYPE	VAV	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	7,250	CFM-CLG:	7,250
MIN %OA:	30	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	23	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	6	5	5	5	5	5	6					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input type="checkbox"/>	FEB: <input type="checkbox"/>	MAR: <input type="checkbox"/>	APR: <input type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input type="checkbox"/>	NOV: <input type="checkbox"/>	DEC: <input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/9/94

LOCATION: FT. RILEY, KS

PREPARED BY: CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7245

AHU NUMBER: HRU-1

AHU LOCATION: LATRINE MEZZ

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE HEAT RECOVERY UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 3

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/9/94

LOCATION: FT. RILEY, KS

PREPARED BY: CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7245

AHU NUMBER: HRU-2

AHU LOCATION: KITCHEN MEZZ

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN &amp; DISHWASHER

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEAT RECOVERY UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 2

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23 MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/9/94  
PREPARED BY: CWW/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7245

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

66

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-675A-40-G-PE

BLR CAP OUTPUT (BTUH):

5,657,000

BLR CAP INPUT (BTUH):

7,071,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 23

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/9/94  
PREPARED BY: CWW/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7245

BOILER RM LOCATION: MEZZ

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: PERIMETER RADIATION



☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE: BLR-1



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

66

BOILER MFG: OLD DOMINION

UNIT MODEL: 50254

BLR CAP OUTPUT (BTUH): 2,000,000

BLR CAP INPUT (BTUH): 2,000,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 23

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/9/94  
PREPARED BY: CWW/AJN

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 7245 BLDG NAME: ENL PERS DIN  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, 2  
UNIT TYPE: OTHER

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 25 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:	
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>		
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>		

CONTROLS COMMENTS: **CW and CNW PUMPS**

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	6-349906-01

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="13"/>	<input type="text" value="0"/>	<input type="text" value="11"/>	<input type="text" value="0"/>	<input type="text" value="11"/>	<input type="text" value="9"/>	<input type="text" value="9"/>
REQ STOP:	<input type="text" value="17"/>	<input type="text" value="0"/>	<input type="text" value="19"/>	<input type="text" value="0"/>	<input type="text" value="19"/>	<input type="text" value="17"/>	<input type="text" value="17"/>

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7264  
AHU NUMBER: AHU-1 AHU LOCATION: CEILING SPACE  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: STAGE/LIBRARY  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,200 CFM-CLG: 7,200  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 46 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	0	11	0	11	9	9
REQ STOP:	17	0	19	0	19	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7264  
AHU NUMBER: AHU-2 AHU LOCATION: CEILING SPACE  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: LIBRARY  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,200 CFM-CLG: 7,200  
MIN %OA: 20 MAX %OA: 100

## NAMEPLATE

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 46 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	0	11	0	11	9	9
REQ STOP:	17	0	19	0	19	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7264  
AHU NUMBER: AHU-3 AHU LOCATION: GAME ROOM FLOOR  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: GAME ROOM  
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,916 CFM-CLG: 6,916  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 45 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	11
REQ STOP:	22	22	22	22	22	22	22

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7264  
AHU NUMBER: AHU-4  
AHU LOCATION: MER NEAR COMM. CENTER O  
REFRIG SYS # SRVNG AHU: CH-2  
SERVES AREA: SOUTH WING  
% OF BLDG AREA HEATED: 41

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,650  
MIN %OA: 15

CFM-CLG: 13,650  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: ELECTRA  
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL: B-32426-2  
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 46  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	0	11	0	11	9	9
REQ STOP:	17	0	19	0	19	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 70  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7264

AHU NUMBER: AHU-5

AHU LOCATION: QUICK SNACK

REFRIG SYS # SRVNG AHU: SELF CONTAINED

SERVES AREA: QUICK SNACK

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LENNOX

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	ELECTRIC	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7264

BOILER RM LOCATION: BASEMENT

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 15

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-360A3-4501B

BLR CAP OUTPUT (BTUH): 2,953,000

BLR CAP INPUT (BTUH): 3,691,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 45

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	11
REQ STOP:	22	22	22	22	22	22	22

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7264 BLDG NAME: LIBRARY MAIN  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: LIBRARY  
SOURCE OF HEATING: BLR-1 SERVES AREA: LIBRARY  
RADIATION UNIT TYPE: STEAM % AREA HTG: 15

**SCHEDULE**

DAYS SCHEDULE NO: 46 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	0	11	0	11	9	9
REQ STOP:	17	0	19	0	19	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL: 2-WAY VALVE, MANUAL OR THERMOSTATIC AT BB

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7264

BLDG NAME: LIBRARY MAIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): BASEMENT

AHU'S SERVED: AHU-1,2,3

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 30HS160D600  
CHILLER SERIAL NO: U228512  
CHILLER V: 460  
CHILLER AMPS: 68  
CHILLER PH: 3  
CHILLER CAP (TONS): 60

TOWER MFG: CARRIER  
# OF TOWER FANS: 6  
TOWER FAN V: 460  
TOWER FAN AMPS: 3.3  
TOWER FAN HP: 0.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 46

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	0	11	0	11	9	9
REQ STOP:	17	0	19	0	19	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATORS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 10

PUMP MFG: LINCON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: FRAME 215T



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7264 BLDG NAME: LIBRARY MAIN  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): KITCHEN  
AHU'S SERVED: AHU-4  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

## NAMEPLATE

CHILLER MFG:	LENNOX	TOWER MFG:	LENNOX
CHILLER MODEL:	SPGH17951	# OF TOWER FANS:	1
CHILLER SERIAL NO:	5193G75642	TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.75
CHILLER PH:	0		
CHILLER CAP (TONS):	5		

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 46 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	13	0	11	0	11	9	9
REQ STOP:	17	0	19	0	19	17	17

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: JM/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7270

BLDG NAME: BN HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 6,130

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 37

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	7	6	0
REQ STOP:	0	17	17	17	16	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/6/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7270

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA:

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,310

CFM-CLG: 6,310

MIN %OA: 40

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 37

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	7	6	0
REQ STOP:	0	17	17	17	16	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 65

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7270

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_  
CONVERTER TYPE: \_\_\_\_\_  
CONV HT SOURCE: \_\_\_\_\_



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: AJAX

UNIT MODEL: WG-450

BLR CAP OUTPUT (BTUH): 360,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 37

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	7	6	0
REQ STOP:	0	17	17	17	16	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: RELIANCE

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: JM/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7270	BLDG NAME:	BN HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	CLERICAL/OFFICES
SOURCE OF HEATING:	BLR-1	SERVES AREA:	CLERICAL/OFFICES
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

### SCHEDULE

DAYS SCHEDULE NO: 37

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	7	6	0
REQ STOP:	0	17	17	17	16	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7270 BLDG NAME: BN HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	20AOC525	# OF TOWER FANS:	2
CHILLER SERIAL NO:	7-93-A26713-2	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	82.2	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	25		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 37 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	7	6	0
REQ STOP:	0	17	17	17	16	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10-11-94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: **7285** BLDG NAME: **CLOTHING SALES**  
ELECTRIC METER: **N** CONDITIONED SQFT: **17,042**  
GAS METER: **N**  
SUSPECT ACM: **Y**

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: **18**

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PRES STOP:	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>
REQ START:	<b>0</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>10</b>
REQ STOP:	<b>0</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>19</b>	<b>18</b>	<b>16</b>

**REMARKS:**

SUSPECT ACM LOCATED ON PIPING AND PIPE FITTINGS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10-11-94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7285

AHU NUMBER: AHU-1

AHU LOCATION: 2ND FLOOR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,700

CFM-CLG: 18,700

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MCQUAY

UNIT MODEL: 2G323V-X

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	HOT WATER	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 18

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	11	9	10
REQ STOP:	0	18	18	18	19	18	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10-11-94

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7285

BOILER RM LOCATION: MER-1

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: THERMO-PAK

UNIT MODEL: 3WFG-2000

BLR CAP OUTPUT (BTUH): 1,600,000

BLR CAP INPUT (BTUH): 2,000,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 18

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	11	9	10
REQ STOP:	0	18	18	18	19	18	16

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: WAGNER

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0.25

PUMP MFG: B &amp; G

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10-11-94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 7285 BLDG NAME: CLOTHING SALES  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER-1  
AHU'S SERVED: AHU-1  
UNIT TYPE CENTRIFUGAL WITH COOLING TOWER

**NAMEPLATE**

CHILLER MFG: COPELAMETIC TOWER MFG: HALSTED & MITCHELL  
CHILLER MODEL: GRR2-4000-4SN # OF TOWER FANS: 2  
CHILLER SERIAL NO: ETC-82C-00042-S TOWER FAN V: 230  
CHILLER V: 200 TOWER FAN AMPS: 10  
CHILLER AMPS: 142 TOWER FAN HP: 1.5  
CHILLER PH: 3  
CHILLER CAP (TONS): 40  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 18 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	11	9	10
REQ STOP:	0	18	18	18	19	18	16

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N  
CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 7.5 PUMP MFG: GOULD  
PUMP SERVICE: COND WATER PUMP (CNW) PUMP MODEL: 6-330778-03

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/AMS/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7305

BLDG NAME: APP INSTR BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 9,872

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 13

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7305

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-1

SERVES AREA: CLASSROOM

% OF BLDG AREA HEATED: 22

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 1,800

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: LENNOX

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 13 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 70 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 70 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 70 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7305	AHU LOCATION:	MER
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:	ACCU-2	SERVES AREA:	CLASSROOM
		% OF BLDG AREA HEATED:	22
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,800	CFM-CLG:	1,800
MIN %OA:	30	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	LENNOX	UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED FURNACE		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	13	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	22	22	22	22	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	70	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	70	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	70	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	70	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7305		
AHU NUMBER:	AHU-3	AHU LOCATION:	MER
REFRIG SYS # SRVNG AHU:	ACCU-3	SERVES AREA:	CLASSROOM
		% OF BLDG AREA HEATED:	22

AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
---------------	-------------	-----------------------------	---

CFM-HTG:	1,800	CFM-CLG:	1,800
MIN %OA:	30	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	LENNOX	UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	13	MONTH SCHEDULE NO:	3
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	70	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	70	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	70	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	70	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0

MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	Y	TIME CLOCK:	Y
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/AMS/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7305

AHU NUMBER: AHU-4

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: 4

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 12

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: LENNOX

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 13

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 70

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 70

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7305 BLDG NAME: APP INSTR BLDG  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	LENNOX	TOWER MFG:	
CHILLER MODEL:	HS16-553V-2Y	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	17.3	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	4		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 13 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐  
OTHER INDICATORS:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7305

BLDG NAME: APP INSTR BLDG

REF. UNIT NUMBER/TAG: ACCU-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: LENNOX  
CHILLER MODEL: HS16-553V-2Y  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 17.3  
CHILLER PH: 3  
CHILLER CAP (TONS): 4

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.25

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 13

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7305 BLDG NAME: APP INSTR BLDG  
REF. UNIT NUMBER/TAG: ACCU-3 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-3  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	LENNOX	TOWER MFG:	
CHILLER MODEL:	HS16-553V-2Y	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	17.3	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	4		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 13 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/AMS/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7305 BLDG NAME: APP INSTR BLDG  
REF. UNIT NUMBER/TAG: ACCU-4 LOCATION (MER#): EXT. BLDG SOUTH  
AHU'S SERVED: AHU-4  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	LENNOX	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:	5182204459	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	1.2
CHILLER AMPS:	11.8	TOWER FAN HP:	0.16
CHILLER PH:	3		
CHILLER CAP (TONS):	2.7		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 13 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	22	22	22	22	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7350

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: Y

CONDITIONED SQFT: 21,345

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: AHU-1

AHU LOCATION: RM#1 MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: AHU-2

AHU LOCATION: RM#7 MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: AHU-3

AHU LOCATION: RM#7 MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: AHU-4

AHU LOCATION: RM#7 MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GASIFIED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7350  
AHU NUMBER: AHU-5 AHU LOCATION: ROOM 15  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ADMIN  
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

## NAMEPLATE

UNIT MFG: BRYANT UNIT MODEL:  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CVWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350  
AHU NUMBER: AHU-6 AHU LOCATION: ROOM 15  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: ADMIN  
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: MAU-1

AHU LOCATION: MEZZANINE MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CVWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350  
AHU NUMBER: MAU-2  
AHU LOCATION: MEZZANINE MAINT. BAY  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: BAY  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS  
UNIT MODEL:  
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350  
AHU NUMBER: MAU-3 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: MAINT. BAY  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200 CFM-CLG: 0  
MIN %OA: 0 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS UNIT MODEL: GTDM125CRH  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: 0  
CONTROLS COMMENTS: 0

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7350

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJNCWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7404 BLDG NAME: ENL BARRACKS W/O DIN  
ELECTRIC METER: N CONDITIONED SQFT: 50,967  
GAS METER: N  
SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

### REMARKS:

Suspect ACM located on AHU duct flex joints.



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJNCWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7404	AHU LOCATION:	BSMT MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	SOUTH HALF OF BLDG
		% OF BLDG AREA HEATED:	0
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	6
CFM-HTG:	0	CFM-CLG:	29,135
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	DUNHAM BUSH	UNIT MODEL:	MZ-320-D
SUPPLY FAN HP:	7.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	Y
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:	NO CONTROL VALVE ON CHILLED WATER				
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJNCWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7404

AHU NUMBER: AHU-2

AHU LOCATION: AHU ROOM N. BSMT

REFRIG SYS # SRVNG AHU:

SERVES AREA: NORTH HALF OF BLDG

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 0

CFM-CLG: 28,225

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: MZ-320-D

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: NO CONTROL VALVE ON CHILLED WATER

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJNCWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7404

BOILER RM LOCATION: NORTH MER EAST

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-345-45-LB

BLR CAP OUTPUT (BTUH): 2,568,000

BLR CAP INPUT (BTUH): 3,210,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJNCWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7404

BOILER RM LOCATION: NORTH MER WEST

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

**BOILER**

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: M-65-KG

BLR CAP OUTPUT (BTUH): 650,000

BLR CAP INPUT (BTUH): 813,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 12 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJNCWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7404	BLDG NAME:	ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO:	RAD-2	RAD SYS LOCATION:	NORTH MER
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	50

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	2	PUMP MFG:	MARATHON
				PUMP MODEL:	PC56T

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC

RADIATION CONTROL: 3-WAY VALVE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJNCWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7404 BLDG NAME: ENL BARRACKS W/O DIN  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: NORTH MER SOUTH  
SOURCE OF HEATING: BLR-1 SERVES AREA: ALL  
RADIATION UNIT TYPE: HW % AREA HTG: 50

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: MARATHON ELECTRIC  
PUMP MODEL: YVD 145...

**RADIATION PUMP**

PUMP TAG: 2 PUMP HP: 2 PUMP MFG: MARATHON ELECTRIC  
PUMP MODEL: PC56T

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: PNEUMATIC

RADIATION CONTROL: 3-WAY VALVE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME:EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #:DACA 01-94-D-0033  
LOCATION:FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: CWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7410

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: ☒ Y

**CONDITIONED SQFT:** 12,599

**GAS METER:** ☒ Y

SUSPECT ACM: ☐ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 12

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7410

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA:

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,150

CFM-CLG: 6,150

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER

UNIT MODEL: 39ED11

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-330778-04

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	HW	<input checked="" type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 12

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7410

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX

UNIT MODEL: WG-450D

BLR CAP OUTPUT (BTUH):

360,000

BLR CAP INPUT (BTUH):

450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS: O2 TRIM

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0.75

PUMP MFG: MARATHON

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7410

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 30HL030530  
CHILLER SERIAL NO: Y594606  
CHILLER V: 208  
CHILLER AMPS: 112  
CHILLER PH: 3  
CHILLER CAP (TONS): 30

TOWER MFG: CARRIER  
# OF TOWER FANS: 3  
TOWER FAN V: 208  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.48

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 12

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5

PUMP MFG: ALLIS

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: RVN145TTDR5326AA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: **7424** BLDG NAME: **ENL BARRACKS W/O DIN**  
ELECTRIC METER: **N** CONDITIONED SQFT: **50,967**  
GAS METER: **N**  
SUSPECT ACM: **N**

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: **10**

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PRES STOP:	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>
REQ START:	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
REQ STOP:	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CVWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7424  
AHU NUMBER: AHU-1 AHU LOCATION: AHU ROOM SOUTH  
REFRIG SYS # SRVNG AHU: CENTRAL PLANT SERVES AREA: HALF OF FLOORS 1, 2, 3  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 0 CFM-CLG: 29,135  
MIN %OA: 0 MAX %OA: 0

## NAMEPLATE

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: 0  
CONTROLS COMMENTS: 0

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7424

AHU NUMBER: AHU-2

AHU LOCATION: AHU ROOM NORTH

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: HALF OF FLOORS 1, 2, 3

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 0

CFM-CLG: 28,225

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: MZ-320-D

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7424

BOILER RM LOCATION: MER EAST

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: PERIMETER RADIATION

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: BURNHAM

UNIT MODEL: EW-70-6-PF

BLR CAP OUTPUT (BTUH): 2,140,000

BLR CAP INPUT (BTUH): 3,050,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7424

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW SYSTEM

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: M-65-KG

BLR CAP OUTPUT (BTUH): 650,000

BLR CAP INPUT (BTUH): 813,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 12 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7424 BLDG NAME: ENL BARRACKS W/O DIN  
PER RAD (SYSTEM TAG) NO: RAD-2 RAD SYS LOCATION: MER SOUTH  
SOURCE OF HEATING: BLR-1 SERVES AREA: ALL  
RADIATION UNIT TYPE: HW % AREA HTG: 0

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: MARATHON  
PUMP MODEL: UVD56T

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: PNEUMATIC

RADIATION CONTROL: 3-WAY VALVE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7424 BLDG NAME: ENL BARRACKS W/O DIN  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: MER SOUTH  
SOURCE OF HEATING: BLR-1 SERVES AREA: ALL  
RADIATION UNIT TYPE: HW % AREA HTG: 50

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: MARATHON  
PUMP MODEL: ZVB145TT

**RADIATION PUMP**

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP MODEL:

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: PNEUMATIC  
RADIATION CONTROL: 3-WAY VALVE  
OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0  
RESET CONTROL: N  
CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7432

BLDG NAME: ADMIN & SUPPORT BLDG

ELECTRIC METER: ☐ N

CONDITIONED SQFT: 13,500

GAS METER: ☐ Y

SUSPECT ACM: ☐ N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 3

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7432  
AHU NUMBER: FC-1 AHU LOCATION: ABOVE CEILING  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ADMIN AREA  
% OF BLDG AREA HEATED: 35

AHU UNIT TYPE FAN COILS - 2 PIPE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,000 CFM-CLG: 12,000  
MIN %OA: 20 MAX %OA: 20

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL: UNITRANE  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: Total of 20 FCs in Admin. Area

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 3 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: DUAL SETPOINT  
PRESENT TEMP WINTR OCC: 68 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 73 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7432  
AHU NUMBER: HV-1  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY AREA 1  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? Y  
MAX OA DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
TIME CLOCK: N  
RET AIR DMPR CONTROL: N  
ECONOMIZER WB CONTROL: N  
TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CVWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7432

AHU NUMBER: HV-2

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA 2

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7432

AHU NUMBER: HV-3

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA 3

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7432

AHU NUMBER: HV-4

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA 4

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7432

AHU NUMBER: HV-5

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA 5

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7432

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: BURNHAM

UNIT MODEL: 4FW-107-40-1B

BLR CAP OUTPUT (BTUH):

895,000

BLR CAP INPUT (BTUH):

1,119,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 5

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: M3613T

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7432 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FC-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	CGABC206AF013	# OF TOWER FANS:	2
CHILLER SERIAL NO:	J87A80095	TOWER FAN V:	0
CHILLER V:	200	TOWER FAN AMPS:	0
CHILLER AMPS:	98	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	20		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: ARMSTRONG  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7450

BLDG NAME: REGIMENTAL HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 9,850

GAS METER: Y

SUSPECT ACM: N

## BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7450  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ALL  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 825 CFM-CLG: 825  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH UNIT MODEL: HAH-12-C  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: GE RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DTW	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7450

AHU NUMBER: FC-1

AHU LOCATION: THROUGHOUT BLDG.

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 80

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,600

CFM-CLG: 8,600

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: CR-4-FC-4-1

SUPPLY FAN HP: 1.7

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: TOTAL FOR ALL FAN COILS

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7450

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 10

BOILER MFG: AJAX

UNIT MODEL: WG-450

BLR CAP OUTPUT (BTUH): 360,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 135 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: BELL &amp; GOSSETT

PUMP SERVICE:

PUMP MODEL: M80027K48

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7450	BLDG NAME:	REGIMENTAL HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	MER
SOURCE OF HEATING:	BLR-1	SERVES AREA:	STAIRWAY, HALLWAYS
RADIATION UNIT TYPE:	HW	% AREA HTG:	10

**SCHEDULE**

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL: 2-WAY VALVE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7450

BLDG NAME: REGIMENTAL HQ BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: FC-1, AHU-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI

CHILLER MODEL: 30A0CD30

CHILLER SERIAL NO: 5-88-13126

CHILLER V: 208

CHILLER AMPS: 53

CHILLER PH: 3

CHILLER CAP (TONS): 29.8

COMMENTS:

TOWER MFG:

# OF TOWER FANS: 4

TOWER FAN V: 0

TOWER FAN AMPS: 0

TOWER FAN HP: 1

**SCHEDULE**

DAYS SCHEDULE NO: 4

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 5

PUMP MFG: CENTURY

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: 6333484-01



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7485

BLDG NAME: BOWLING ALLEY

ELECTRIC METER: Y

CONDITIONED SQFT: 36,966

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 53

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7485  
AHU NUMBER: AHU-1 AHU LOCATION: ORIG. BLDG MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ORIG. BLDG.  
% OF BLDG AREA HEATED: 46

AHU UNIT TYPE DUAL DUCT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 16,000 CFM-CLG: 16,000  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: WORTHINGTON CORP UNIT MODEL: CM-40.00  
SUPPLY FAN HP: 20 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 53 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7485  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-2 SERVES AREA: NEW ADDITION  
% OF BLDG AREA HEATED: 46

AHU UNIT TYPE VAV NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,000 CFM-CLG: 10,000  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER UNIT MODEL: 34ED23  
SUPPLY FAN HP: 10 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	HOT WATER	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 53 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 70 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 70 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 70 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7485	AHU LOCATION:	STORAGE/ MAINTENANCE
AHU NUMBER:	UH-1		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	ORIG. BLDG
		% OF BLDG AREA HEATED:	4
AHU UNIT TYPE		UNIT HEATER	NUMBER OF ZONES IF MZ UNIT: 0
CFM-HTG:	2,200	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.25	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	53	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	12	9	9	9	9	9	9					
REQ STOP:	22	24	24	24	24	2	2					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7485	AHU LOCATION:	STORAGE/ MAINTENANCE
AHU NUMBER:	UH-2		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	NEW ADDITION
		% OF BLDG AREA HEATED:	4
AHU UNIT TYPE		UNIT HEATER	
		NUMBER OF ZONES IF MZ UNIT: 0	
CFM-HTG:	1,630	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.25	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	53	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	12	9	9	9	9	9	9					
REQ STOP:	22	24	24	24	24	2	2					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7485

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: AHU-1,2 & UH-1,2

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX

UNIT MODEL: WGFD-2000

BLR CAP OUTPUT (BTUH): 1,600,000

BLR CAP INPUT (BTUH): 2,000,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 53

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 3

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL: UVE 182TTDR7627ACL

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7485 BLDG NAME: BOWLING ALLEY  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CD60	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9692	TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	4.6
CHILLER AMPS:	250	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	60		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 53 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7485

BLDG NAME: BOWLING ALLEY

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38AD-028-530  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 28

TOWER MFG:  
# OF TOWER FANS: 3  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 53

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7500

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: N

CONDITIONED SQFT: 22,325

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500

AHU NUMBER: AHU-2

AHU LOCATION: MEZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7500	AHU LOCATION:	MEZZANINE
AHU NUMBER:	AHU-3		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	OFFICES/BAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,800	CFM-CLG:	0
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	BRYANT	UNIT MODEL:	394GAZ048100
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500

AHU NUMBER: AHU-4

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500  
AHU NUMBER: AHU-5  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT  
UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ N  
RET AIR DMPR CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N  
MIXED AIR DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N  
IMPLEMENT DEMAND LIMIT CNTRLS? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500  
AHU NUMBER: AHU-6 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500  
AHU NUMBER: MAU-1 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS UNIT MODEL: GTDM400  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: ☐ MIXED AIR DMPR CONTROL: ☐ IMPLEMENT DEMAND LIMIT CNTRLS? ☐  
MAX OA DMPR CONTROL: ☐ ECONOMIZER DB CONTROL: ☐ TIME CLOCK: ☐  
RET AIR DMPR CONTROL: ☐ ECONOMIZER WB CONTROL: ☐ TIME CLOCK OPERATIONAL? ☐  
EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7500	AHU LOCATION:	MEZZANINE
AHU NUMBER:	MAU-2		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	MAINT. BAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	4,120	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	KING AIR SYSTEMS	UNIT MODEL:	GTDM400
SUPPLY FAN HP:	2	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500

AHU NUMBER: MAU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7500

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7500  
AHU NUMBER: RAD-2  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0  
CFM-CLG: 0  
MAX %OA: 0

## NAMEPLATE

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.33  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRL? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="15"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520  
AHU NUMBER: AHU-1  
REFRIG SYS # SRVNG AHU: NONE  
AHU LOCATION: MEZZANINE  
SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE: SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600  
MIN %OA: 30  
CFM-CLG: 0  
MAX %OA: 30

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GA2048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520  
AHU NUMBER: AHU-3  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800  
MIN %OA: 30  
CFM-CLG: 0  
MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT  
UNIT MODEL: 394GA2048100  
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐ N  
MIXED AIR DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
RET AIR DMPR CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N  
IMPLEMENT DEMAND LIMIT CNTRLs? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7520  
AHU NUMBER: AHU-4 AHU LOCATION: NEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 0  
MIN %OA: 30 MAX %OA: 30

## NAMEPLATE

UNIT MFG: BRYANT UNIT MODEL: 394GA2048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS FIRED RESIDENTIAL FURNACE

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIPT: OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520  
AHU NUMBER: AHU-5 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200 CFM-CLG: 0  
MIN %OA: 30 MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GA2048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS - FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GA2048100

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520  
AHU NUMBER: MAU-2 AHU LOCATION: BAYS  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS UNIT MODEL: GTDM400  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JMAJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7520  
AHU NUMBER: MAU-3  
AHU LOCATION: BAYS  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: BAYS  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

## NAMEPLATE

UNIT MFG: KING AIR SYSTEMS  
UNIT MODEL:  
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ Y  
RET AIR DMPR CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N  
MIXED AIR DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N  
IMPLEMENT DEMAND LIMIT CNTRLS? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7520

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7602

BLDG NAME: ADMIN & SUPPORT BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 13,520

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

Locations of Suspect ACM: Pipe fittings, boiler

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7602

AHU NUMBER: AHU-1

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICE AREA 1

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: GC1921146

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7602

AHU NUMBER: AHU-2

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICE AREA 2

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: GC1921146

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7602

AHU NUMBER: AHU-3

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICE AREA 3

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: GC1921146

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7602

AHU NUMBER: AHU-4

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICE AREA 4

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: GC1021146

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7602

AHU NUMBER: AHU-5

AHU LOCATION: STORAGE AREA

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICE AREA 5

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: GC1921146

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7602

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT



##### ☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



##### ☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

100

BOILER MFG: OSAGE

UNIT MODEL: 40-5-201

BLR CAP OUTPUT (BTUH):

800,000

BLR CAP INPUT (BTUH):

1,000,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS  
ON:

JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7602	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERIMETER OF BLDG.
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	CENTURY
				PUMP MODEL:	SC-18262-KCA-6

### SCHEDULE

DAYS SCHEDULE NO:	2	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7602 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1, 2, 3, 4, & 5  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	LARKIN
CHILLER MODEL:	SC2C515	# OF TOWER FANS:	2
CHILLER SERIAL NO:	9129-1	TOWER FAN V:	208
CHILLER V:	230	TOWER FAN AMPS:	9.2
CHILLER AMPS:	62	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	15		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ TEMP LITE HI: ☐  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐  
OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 1 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: SC-182-KMA

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CVWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7604 BLDG NAME: GEN INST BLDG  
ELECTRIC METER: Y  
GAS METER: Y  
SUSPECT ACM: N  
CONDITIONED SQFT: 13,493

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 61

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	23	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	23	0

### REMARKS:

BLDG. contact: Ms Foreman @ ext. 9475

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7604  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: WEST HALF OF BLDG.  
% OF BLDG AREA HEATED: 45

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,000 CFM-CLG: 6,000  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL: MODULAR  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 62 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7604  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: EAST HALF OF BLDG.  
% OF BLDG AREA HEATED: 45

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,000 CFM-CLG: 6,000  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 62 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? Y  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7604

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: SOUTH ADMIN OFFICES

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000

CFM-CLG: 2,000

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MCCA006MADOE

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 62

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 76

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 60

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 65

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7604

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: EW20GPF

BLR CAP OUTPUT (BTUH): 648,000

BLR CAP INPUT (BTUH): 877,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 61

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	23	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	23	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F108

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7604

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 61

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	23	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	23	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: HWP-1

PUMP HP: 2

PUMP MFG: US ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F108UVD56T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7604 BLDG NAME: GEN INST BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1,2,3  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TRANE
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	8
CHILLER SERIAL NO:	9225-2	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.1
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 62 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: U S ELECTRIC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="6"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="6"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON PIPE FITTINGS AND BOILER FLUE

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7606

AHU NUMBER: AHU-1

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: DINNING

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000

CFM-CLG: 7,000

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7606

AHU NUMBER: AHU-2

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: DINNING

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250

CFM-CLG: 7,250

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7606	AHU LOCATION:	MEZZ
AHU NUMBER:	HRU-1		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	KITCHEN
		% OF BLDG AREA HEATED:	20
AHU UNIT TYPE	HEAT RECOVERY UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	11,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	3
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	23	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	6	5	5	5	5	5	6					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7606	AHU LOCATION:	MEZZ
AHU NUMBER:	HRU-2		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	KITCHEN
		% OF BLDG AREA HEATED:	10
AHU UNIT TYPE	HEAT RECOVERY UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	3,600	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1.5	RET/EXH FAN HP:	1
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	23	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	6	5	5	5	5	5	6					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7606

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW



☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



☐ **CENTRAL PLANT DIRECT**

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE

UNIT MODEL: A-250

BLR CAP OUTPUT (BTUH): 6,900,000

BLR CAP INPUT (BTUH): 8,625,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 8 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7606

BOILER RM LOCATION: MEZZ

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

☐ BOILER  
BOILER TAG:   
BOILER TYPE:   
FUEL TYPE:

☒ CONVERTER  
CONVERTER TAG: CV-1  
CONVERTER TYPE: STM TO HTHW  
CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: DUNHAM BUSH  
UNIT MODEL:

BLR CAP OUTPUT (BTUH): 2,000,000  
BLR CAP INPUT (BTUH): 2,000,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 23 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:   
RESET CONTROLS: N  
CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG: BALDOR  
PUMP SERVICE: HW PUMP PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7606 BLDG NAME: ENL PERS DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, 2  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9225-5	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 23 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: SC-215-FMA



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7608 BLDG NAME: ADMIN & SUPPORT BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: Y  
CONDITIONED SQFT: 13,520

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:

Suspect ACM is located on pipe fittings and boiler.

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7608

AHU NUMBER: AHU-1

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 1

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GENERAL ELECT

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K42HG2571

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7608

AHU NUMBER: AHU-2

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 2

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GENERAL ELECT

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K42HG2571

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7608

AHU NUMBER: AHU-3

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 3

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GENERAL ELECT

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K42HG2571

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CVWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7608

AHU NUMBER: AHU-4

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 4

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GENERAL ELECT

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K42HG2571

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7608

AHU NUMBER: AHU-5

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 5

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GENERAL ELECT

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K42HG2571

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7608

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: PERIMETER RADIATION

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: OSAGE

UNIT MODEL: 40-5-201

BLR CAP OUTPUT (BTUH): 800,000

BLR CAP INPUT (BTUH): 1,000,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

4

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7608	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERIMETER OF BLDG
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

### RADIATION PUMP

PUMP TAG: 1 PUMP HP: 0.5 PUMP MFG: RELIANCE  
PUMP MODEL: Y214669A5

### SCHEDULE

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0

RESET CONTROL: ☒ N

CONTROL COMMENTS: 3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7608 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1, 2, 3, 4, & 5  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	LARKIN
CHILLER MODEL:	SC2CS15	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	9.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	15		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 4 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: SC-182-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7610

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7610  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: SERVES AREA: HALLWAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 CFM-CLG: 3,500  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM UNIT MODEL:  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 8-331260-03 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7610

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

15

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH):

2,350,000

BLR CAP INPUT (BTUH):

2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 200 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7610

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

15

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH):

1,939,200

BLR CAP INPUT (BTUH):

2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7610

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-184-KMA

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7610

BOILER RM LOCATION: MER

#### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-2

PUMP HP:

1.5

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-184-KMA



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7610

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-3

PUMP HP: 1.5

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-164-KMA

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7610

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7610	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	LATRINES & FOYERS
SOURCE OF HEATING:	BR	SERVES AREA:	LATRINES & FOYERS
RADIATION UNIT TYPE:	HW	% AREA HTG:	15

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	RELIANCE DUTY
				PUMP MODEL:	Y21 4669A10

**SCHEDULE**

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	PNEUMATIC
RADIATION CONTROL:	3-WAY VALVE HW RESET AT BOILER/CONVERTER
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
	RESET CONTROL: <input checked="" type="checkbox"/>
CONTROL COMMENTS:	

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7610 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	BOHN
CHILLER MODEL:	CRHM300A-2JMA	# OF TOWER FANS:	3
CHILLER SERIAL NO:	090D2926	TOWER FAN V:	208
CHILLER V:	200	TOWER FAN AMPS:	7.2
CHILLER AMPS:	0	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	60		

COMMENTS: 3 HP - OTHER THREE DUAL TEMPS UNREADABLE LOOKS SIMILAR TO OTHER BLDGS.

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	37	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)	PUMP MODEL:	FA5613415558		

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7612

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 41,892

GAS METER: Y

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

Suspect ACM located on pipe fittings

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7612	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	HALLWAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	3,500	CFM-CLG:	3,500
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	CENTURY	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	8-331260-03	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	OTHER		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7612  
AHU NUMBER: AHU-2 AHU LOCATION: MER 1ST FLR  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALLWAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 CFM-CLG: 3,500  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: DAYTON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 3N450 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7612

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

20

BOILER MFG: KEWNNEE

BLR CAP OUTPUT (BTUH):

2,350,000

UNIT MODEL:

BLR CAP INPUT (BTUH):

2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: DHW

<input checked="" type="radio"/> <input checked="" type="checkbox"/> <b>BOILER</b> BOILER TAG: BLR-2 BOILER TYPE: MED PRESS STEAM (15# TO 125#) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE  
UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,200  
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 10 DEG F or PSIG  
TYPE OF BURNER CONTROLS:   
RESET CONTROLS: N  
CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

#### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-184-KMA

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 1.5

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-164-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7612

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:** ALL

<input type="radio"/> <b>BOILER</b> BOILER TAG: DTWP-3 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS:  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

**HW PUMP**PUMP TAG: DTWP-3 PUMP HP: 1.5 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: SC-164 KMA

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-4 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:   
UNIT MODEL:   
COMMENTS:   
BLR CAP OUTPUT (BTUH):   
BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:   
OPERATING SETPOINT:   
TYPE OF BURNER CONTROLS:   
RESET CONTROLS: N  
CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-4 PUMP HP: 3 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: SC-213-FMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7612 BLDG NAME: ENL BARRACKS W/AS  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: VESTIBULES, TOILETS  
SOURCE OF HEATING: BLR-1 SERVES AREA:  
RADIATION UNIT TYPE: HW % AREA HTG: 20

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 0.5 PUMP MFG: RELIANCE  
PUMP MODEL: 442775-GT

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS: 3 WAY PNEUMATIC CONTROL VALVE IN MER

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7612 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: ALL  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	70		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	55	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: AURORA  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

Bldg. Contact @ Ext. 5367 Suspect ACM located on boiler flue and DHW storage tanks



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7614

AHU NUMBER: AHU-1

AHU LOCATION: MER. NORTH

REFRIG SYS # SRVNG AHU: ch-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7614

AHU NUMBER: AHU-2

AHU LOCATION: MER SOUTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7614

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7614

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH):

1,939,200

BLR CAP INPUT (BTUH):

2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7614

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7614

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7614

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: A11

<input type="radio"/> <b>BOILER</b> BOILER TAG: DTWP-3 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: UNIT MODEL: BLR CAP OUTPUT (BTUH): BLR CAP INPUT (BTUH):  
COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC RESET CONTROLS: N  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-3 PUMP HP: 2 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: 5C-184-KMA

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CVWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7614

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-4 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:

BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-4 PUMP HP: 3 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7614	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

### SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3 WAY PNEUMATIC CONTROL VALVE IN MER

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7614 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU'S & FC'S  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	7.2
CHILLER AMPS:	300	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: AURORA  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7616

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N

CONDITIONED SQFT: 41,892

GAS METER: Y

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

Suspect ACM located on boiler flues and DHW storage tanks.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7616	AHU LOCATION:	MER 1ST FLOOR EAST
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	ch-1	SERVES AREA:	HALLWAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	3,500	CFM-CLG:	3,500
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	AIRTHERM	UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	CENTURY	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	8-331260-03	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	OTHER
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	N
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

AHU NUMBER: AHU-2

AHU LOCATION: MER 1ST FLOOR WEST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

20

BOILER MFG: KEWANEE

UNIT MODEL: CAT. M-235-KX

BLR CAP OUTPUT (BTUH):

2,350,000

BLR CAP INPUT (BTUH):

2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

**BOILER**

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: OSAGE

UNIT MODEL: 6015

BLR CAP OUTPUT (BTUH): 1,939,200

BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-148-KMA

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☒ JUN: ☒ JUL: ☒ AUG: ☒ SEP: ☒ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-148-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CVVV

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT ☐ BLR/CONVERTER SERVES AREA OR SERVICE: ALL☐**BOILER**

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-3

PUMP HP: 5

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-215-FMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7616

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐**BOILER**

BOILER TAG: DTWP-4

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: DTWP-4

PUMP HP: 3

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: SC-213-FMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7616	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-ET

**SCHEDULE**

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3 WAY PNEUMATIC CONTROL VALVE IN MER

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7616 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: FC'S AND AHU'S  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2C070	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-2	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	135	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	45	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**CW and CNW PUMPS**

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER FLUES AND HW STORAGE TANKS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7618	AHU LOCATION:	MER 1ST FLR WEST
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	HALF OF 1ST FLOOR
		% OF BLDG AREA HEATED:	16.7
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	2
CFM-HTG:	5,044	CFM-CLG:	5,044
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	TEMTROL	UNIT MODEL:	BX135
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	U.S. ELECTRIC	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	184T	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7618  
AHU NUMBER: AHU-2  
REFRIG SYS # SRVNG AHU:   
AHU LOCATION: MER 1ST FLR. EAST  
SERVES AREA: HALF OF 1ST FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044  
MIN %OA: 0

CFM-CLG: 5,044  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL  
SUPPLY FAN HP: 5  
SUPPLY FAN MTR MFG: U.S. ELECTRIC  
SUPPLY FAN MTR MODEL: 184T  
COMMENTS:  
UNIT MODEL: BX135  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7618

AHU NUMBER: AHU-3

AHU LOCATION: MER 2ND FLR. EAST

REFRIG SYS # SRVNG AHU:

SERVES AREA: HALF OF 2ND FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: RL184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7618  
AHU NUMBER: AHU-4 AHU LOCATION: MER 2ND FLR. WEST  
REFRIG SYS # SRVNG AHU: SERVES AREA: HALF OF 2ND FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044 CFM-CLG: 5,044  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BZ135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RL184T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7618

AHU NUMBER: AHU-5

AHU LOCATION: MER 3RD FLR. EAST

REFRIG SYS # SRVNG AHU:

SERVES AREA: HAFL OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ155

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-350192-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7618  
AHU NUMBER: AHU-6  
AHU LOCATION: MER 3RD FLR. WEST  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: HALF OF 3RD FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE  
NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900  
MIN %OA: 0  
CFM-CLG: 6,900  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL  
SUPPLY FAN HP: 7.5  
SUPPLY FAN MTR MFG: CENTURY  
SUPPLY FAN MTR MODEL: 6-350192-03  
UNIT MODEL: BZ155  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRL? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7618

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: KEWANEE

UNIT MODEL: CAT. M-235-KX

BLR CAP OUTPUT (BTUH):

2,350,000

BLR CAP INPUT (BTUH):

2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL: 5K37PN70

**HW PUMP**

PUMP TAG: 2

PUMP HP: 0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

**HW PUMP**

PUMP TAG: 3 PUMP HP: 0.75 PUMP MFG: GE  
PUMP SERVICE: HW PUMP PUMP MODEL:

**HW PUMP**

PUMP TAG: 4 PUMP HP: 0.75 PUMP MFG: GE  
PUMP SERVICE: HW PUMP PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7618

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE  
UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,200  
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7618

BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHUS 1-6

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD70  
CHILLER SERIAL NO: 9488-1  
CHILLER V: 0  
CHILLER AMPS: 135  
CHILLER PH: 0  
CHILLER CAP (TONS): 73.8

TOWER MFG: TSI  
# OF TOWER FANS: 6  
TOWER FAN V: 208  
TOWER FAN AMPS: 30  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 4250

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG: CENTURY

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: SC-213-FMA-6-310206-01



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7620

BLDG NAME: BN ADMIN &amp; CLRM

ELECTRIC METER: ☐ N

CONDITIONED SQFT: 6,340

GAS METER: ☐ NSUSPECT ACM: ☐ Y**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 16

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

SUSPECT ACM ON PIPE FITTINGS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7620

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,310

CFM-CLG: 6,310

MIN %OA: 40

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: MZ-64-D

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 16

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 72

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 72

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 72

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☒IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☒ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☒

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7620

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX

UNIT MODEL: WG-450

BLR CAP OUTPUT (BTUH): 360,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 16

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE:  
PREPARED BY:

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7620 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CS25	# OF TOWER FANS:	2
CHILLER SERIAL NO:	10656-2	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.8
CHILLER AMPS:	88.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	20.5		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 16 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: AJN/CVWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7622

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: N

CONDITIONED SQFT: 12,380

GAS METER: N

SUSPECT ACM: Y

## BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 5

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

SUSPECT ACM LOCATED ON PIPE FITTINGS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/5/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7622

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: NW CLASSROOMS

% OF BLDG AREA HEATED: 23

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 3,880

CFM-CLG: 3,880

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM BUSCH

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/5/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7622  
AHU NUMBER: AHU-2 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: SE. OFFICES/ CLASSROOMS  
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 3,780 CFM-CLG: 3,780  
MIN %OA: 25 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM - BUSH UNIT MODEL: MZ-32  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7622	AHU LOCATION:	MER
AHU NUMBER:	AHU-3		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	SW OFFICES/CLASSROOMS
		% OF BLDG AREA HEATED:	27
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	5
CFM-HTG:	6,155	CFM-CLG:	6,155
MIN %OA:	20	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	DUNHAM - BUSCH	UNIT MODEL:	MZ-64
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	INSIDE UNIT		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	5	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7622

BOILER RM LOCATION: BOILER ROOM MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



☐ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 27

BOILER MFG: AJAX

UNIT MODEL: WG-900

BLR CAP OUTPUT (BTUH): 720,000

BLR CAP INPUT (BTUH): 900,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 5

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: HW PUMP

PUMP MODEL: H712

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/5/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7622 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,3  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	502CD55	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	45		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: CW-1 PUMP HP: 3 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: 6-333483-02

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/6/94

PREPARED BY: AJN/DEJ

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7624  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ALL  
% OF BLDG AREA HEATED: 72

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,353 CFM-CLG: 10,353  
MIN %OA: 13 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7624

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

28

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

310,000

BLR CAP INPUT (BTUH):

387,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

11

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 110 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.75

PUMP MFG: B&amp;G

PUMP SERVICE: HW PUMP

PUMP MODEL: GT-1008071-118

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/6/94  
PREPARED BY: AJN/DEJ

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7624 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

## NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502C830	# OF TOWER FANS:	0
CHILLER SERIAL NO:	9129-3	TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	102	TOWER FAN HP:	0
CHILLER PH:	3		
CHILLER CAP (TONS):	30		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7626 BLDG NAME: CLINIC W/O BEDS  
ELECTRIC METER: N CONDITIONED SQFT: 3,604  
GAS METER: N  
SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 12

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER AND AHU DUCTWORK

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7626	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	CLINIC ROOMS AND LOUNGE
		% OF BLDG AREA HEATED:	80

AHU UNIT TYPE	MZ	NUMBER OF ZONES IF MZ UNIT:	2
---------------	----	-----------------------------	---

CFM-HTG:	3,230	CFM-CLG:	3,230
MIN %OA:	20	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	DANHAM-BUSH	UNIT MODEL:	MZ-32-CO
SUPPLY FAN HP:	2	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	SF184TDB26W	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	12	MONTH SCHEDULE NO:	3
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	70	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	70	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	70	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	70	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0

MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7626

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

20

BOILER MFG: THERMO-PAK

UNIT MODEL: GWA-258X

BLR CAP OUTPUT (BTUH):

206,000

BLR CAP INPUT (BTUH):

258,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 12

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 120 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: RELIANCE

PUMP SERVICE: HW PUMP

PUMP MODEL: Y214669A15DT

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7626

BLDG NAME: CLINIC W/O BEDS

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: 502CS10  
CHILLER SERIAL NO: 106565  
CHILLER V: 208  
CHILLER AMPS: 4.8  
CHILLER PH: 3  
CHILLER CAP (TONS): 10.6

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 208  
TOWER FAN AMPS: 4.8  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 12

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2

PUMP MFG:

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7630

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: N

CONDITIONED SQFT: 6,158

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7630  
AHU NUMBER: AHU-1  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1  
SERVES AREA: ADMIN & CLASSROOM  
% OF BLDG AREA HEATED: 72

AHU UNIT TYPE MULTI ZONE  
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,353  
MIN %OA: 13  
CFM-CLG: 10,353  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH  
UNIT MODEL: MZ-100-CQ  
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: TOSHIBA  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: BY75FL2UCTEFC  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 72  
PRESENT TEMP WINTR UNOCC: 72  
PRESENT TEMP SUM OCC: 72  
PRESENT TEMP SUM UNOCC: 72  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: Y  
MIXED AIR DMPR CONTROL: Y  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7630

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

28

BOILER MFG: THERMOPAK

UNIT MODEL: GWA-387X

BLR CAP OUTPUT (BTUH):

310,000

BLR CAP INPUT (BTUH):

387,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.75

PUMP MFG:

U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL:

UT-4

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7630 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CS30	# OF TOWER FANS:	2
CHILLER SERIAL NO:	9129-4	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	4.6
CHILLER AMPS:	102	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	30		

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7632 BLDG NAME: GYMNASIUM  
ELECTRIC METER: N  
GAS METER: Y  
SUSPECT ACM: N  
CONDITIONED SQFT: 20,694

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 42

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632  
AHU NUMBER: FC-1

AHU LOCATION: WOMEN AND MENS SHOWER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SHOWERS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:  UNIT MODEL:   
SUPPLY FAN HP: 0.12 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:  RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 62 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: ☐ MIXED AIR DMPR CONTROL: ☐ IMPLEMENT DEMAND LIMIT CNTRLS? ☐  
MAX OA DMPR CONTROL: ☒ ECONOMIZER DB CONTROL: ☐ TIME CLOCK: ☐  
RET AIR DMPR CONTROL: ☐ ECONOMIZER WB CONTROL: ☐ TIME CLOCK OPERATIONAL? ☐  
EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632

AHU NUMBER: FC-2

AHU LOCATION: WOMEN AND MENS SHOWER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SHOWERS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.12

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 62

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632

AHU NUMBER: HV-1

AHU LOCATION: CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632

AHU NUMBER: HV-2

AHU LOCATION: CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632

AHU NUMBER: HV-3

AHU LOCATION: CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: STEAM

☒

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7632

AHU NUMBER: HV-4

AHU LOCATION: CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632

AHU NUMBER: HV-5

AHU LOCATION: CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE ☐HEATING COIL: STEAM ☒REHEAT COIL: NONE ☐HUMIDIFIER: NONE ☐COOLING COIL: NONE ☐**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7632

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: OSAGE

UNIT MODEL: 5-751.1

BLR CAP OUTPUT (BTUH):

2,503,000

BLR CAP INPUT (BTUH):

3,128,750

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

42

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7632

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

**BOILER**

BOILER TAG: BLR-2

BOILER TYPE: LOW PRESS STEAM (&lt;15#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: AMERICAN STD

UNIT MODEL: G-66

BLR CAP OUTPUT (BTUH):

520,000

BLR CAP INPUT (BTUH):

650,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 42

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 9 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/93  
PREPARED BY: AJN./CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7636 BLDG NAME: REGIMENTAL HQ BLDG  
ELECTRIC METER: N  
GAS METER: Y  
SUSPECT ACM: Y  
CONDITIONED SQFT: 9,850

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 9

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:

Suspect ACM located on pipe fittings

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/93

PREPARED BY: AJN./CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7636

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: 1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 825

CFM-CLG: 825

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: HAH-12-C

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/93

PREPARED BY: AJN./CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7636  
AHU NUMBER: FC-1 AHU LOCATION:   
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ALL  
% OF BLDG AREA HEATED: 80

AHU UNIT TYPE FAN COILS - 2 PIPE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,600 CFM-CLG: 8,600  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH UNIT MODEL: CR-4-FC-4-1  
SUPPLY FAN HP: 1.7 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/93  
PREPARED BY: AJN./CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7636

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 10

BOILER MFG: AJAX

UNIT MODEL: WG-450

BLR CAP OUTPUT (BTUH): 360,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 9

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 135 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: B&amp;G

PUMP SERVICE: HW PUMP

PUMP MODEL: M80027K48

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/93  
PREPARED BY: AJN./CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7636	BLDG NAME:	REGIMENTAL HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	MER
SOURCE OF HEATING:	BLR-1	SERVES AREA:	STAIRWAY, HALLWAYS
RADIATION UNIT TYPE:	HW	% AREA HTG:	10

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	BELL & GOSSETT
				PUMP MODEL:	M80027K48

**SCHEDULE**

DAYS SCHEDULE NO:	4	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	ELECTRIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/93  
PREPARED BY: AJN./CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7636 BLDG NAME: REGIMENTAL HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FC-1, AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	30A0CD30	# OF TOWER FANS:	4
CHILLER SERIAL NO:	5-88-13126	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	53	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	29.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 9 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	6333484-01

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7638 BLDG NAME: BN ADMIN & CLRM  
ELECTRIC METER: N CONDITIONED SQFT: 6,158  
GAS METER: N  
SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7638

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: ADMIN AND CLASSRM

% OF BLDG AREA HEATED: 72

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,353

CFM-CLG: 10,353

MIN %OA: 13

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH

UNIT MODEL: MZ-100-CQ

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: TOSHIBA

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BY754FLF2UCTEF

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 72

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 72

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 72

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7638

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

28

BOILER MFG: THERMOPAK

UNIT MODEL: GWA-387X

BLR CAP OUTPUT (BTUH):

310,000

BLR CAP INPUT (BTUH):

387,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.5

PUMP MFG: RELIANCE

PUMP SERVICE: HW PUMP

PUMP MODEL: Y214669A12T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7638 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CS30	# OF TOWER FANS:	2
CHILLER SERIAL NO:	9129-4	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	4.6
CHILLER AMPS:	102	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	30		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7642 BLDG NAME: ENL BARRACKS W/O DIN  
ELECTRIC METER: N  
GAS METER: Y  
SUSPECT ACM: Y  
CONDITIONED SQFT: 41,892

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

### REMARKS:

SUSPECT ACM LOCATED ON BOILER FLUE AND HW STORAGE TANK

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7642

AHU NUMBER: AHU-1

AHU LOCATION: MER 1ST FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1/2 OF 1ST FLR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG: TEMTROL

UNIT MODEL: BX135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: U.S. ELECTRIC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 184T

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7642

AHU NUMBER: AHU-2

AHU LOCATION: MER 1ST FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1/2 OF 1ST FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

MIN %OA: 0

CFM-CLG: 5,044

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BX135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: U.S. ELECTRIC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7642  
AHU NUMBER: AHU-3 AHU LOCATION: MER 2ND FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 1/2 OF 2ND FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044 CFM-CLG: 5,044  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BZ135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: BL 184T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7642	AHU LOCATION:	MER 2ND FLR EAST
AHU NUMBER:	AHU-4	SERVES AREA:	1/2 OF 2ND FLOOR
REFRIG SYS # SRVNG AHU:	CH-1	% OF BLDG AREA HEATED:	16.7
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	2
CFM-HTG:	5,044	CFM-CLG:	5,044
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	TEMTROL	UNIT MODEL:	BZ135
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	BL 184T	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7642	AHU LOCATION:	MER 3RD FLR EAST
AHU NUMBER:	AHU-5		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	1/2 OF 3RD FLOOR
		% OF BLDG AREA HEATED:	16.7
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	2
CFM-HTG:	6,900	CFM-CLG:	6,900
MIN %OA:	0	MAX %OA:	0

## NAMEPLATE

UNIT MFG:	TEMTROL	UNIT MODEL:	BZ 155
SUPPLY FAN HP:	7.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	CENTURY	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	6-350192-03	RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7642

AHU NUMBER: AHU-6

AHU LOCATION: MER 3RD FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 1/2 OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ155

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-350192-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7642

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 4

PUMP HP: 0.75

PUMP MFG: GENERAL ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: 5K37PN70

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL: 5K37PN70

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

#### HW PUMP

PUMP TAG:	2	PUMP HP:	0.75	PUMP MFG:	GE
PUMP SERVICE:	HW PUMP			PUMP MODEL:	5K37PN70

#### HW PUMP

PUMP TAG:	3	PUMP HP:	0.75	PUMP MFG:	GE
PUMP SERVICE:	HW PUMP			PUMP MODEL:	5K37PN70

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7642.

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒

☒ BOILER

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE  
UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,200  
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7642 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1-6  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC1CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9488-1	TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	30
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	45	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER FLUE AND HW STORAGE TANK

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644  
AHU NUMBER: AHU-1 AHU LOCATION: MER 1ST FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 1ST FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044 CFM-CLG: 5,044  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BX135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: U.S. ELECTRIC RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 184T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644

AHU NUMBER: AHU-2

AHU LOCATION: MER 1ST FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 1ST FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BX135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: U.S. ELCTRIC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CVVV

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644  
AHU NUMBER: AHU-3 AHU LOCATION: MER 2ND FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 2ND FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044 CFM-CLG: 5,044  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BZ135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: BL184T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644

AHU NUMBER: AHU-4

AHU LOCATION: MER 2ND FLOR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 2ND FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BL184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644  
AHU NUMBER: AHU-5 AHU LOCATION: MER 3RD FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 3RD FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900 CFM-CLG: 6,900  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BZ155  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6-350192-03 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644

AHU NUMBER: AHU-6

AHU LOCATION: MER 3RD FLR

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ155

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-350192-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: KEWANEE

UNIT MODEL: CAT. M-235-KX

BLR CAP OUTPUT (BTUH):

2,350,000

BLR CAP INPUT (BTUH):

2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG: 2

PUMP HP:

0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

**HW PUMP**

PUMP TAG: 3 PUMP HP: 0.75 PUMP MFG: GE  
PUMP SERVICE: HW PUMP PUMP MODEL:

**HW PUMP**

PUMP TAG: 4 PUMP HP: 0.75 PUMP MFG: GE  
PUMP SERVICE: HW PUMP PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7644

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,000

BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7644 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9488-1	TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	30
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
CWS SETPOINT: 4250 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7646

BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N

CONDITIONED SQFT: 41,892

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER FLUE AND HW STORAGE TANK

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7646	AHU LOCATION:	MER 1ST FLR EAST
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	HALF OF 1ST FLOOR
		% OF BLDG AREA HEATED:	16.7
AHU UNIT TYPE		NUMBER OF ZONES IF MZ UNIT:	
MULTI ZONE		2	
CFM-HTG:	5,044	CFM-CLG:	5,044
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	TEMROL	UNIT MODEL:	BX135
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	U.S. ELECTRIC	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	184T	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7646  
AHU NUMBER: AHU-2 AHU LOCATION: MER 1ST FLR. EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 1ST FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044 CFM-CLG: 5,044  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BX135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: U.S. ELECTRIC RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 184T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7646

AHU NUMBER: AHU-3

AHU LOCATION: MER 2ND FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 2ND FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BL184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7646

AHU NUMBER: AHU-4

AHU LOCATION: MER 2ND FLR. EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 2ND FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BL184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7646  
AHU NUMBER: AHU-5  
AHU LOCATION: MER 3RD FLR. EAST  
REFRIG SYS # SRVNG AHU: CH-1  
SERVES AREA: HALF OF 3RD FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900  
MIN %OA: 0

CFM-CLG: 6,900  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL  
UNIT MODEL: BZ155  
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6-350192-03  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10  
MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
TIME CLOCK: N  
RET AIR DMPR CONTROL: N  
ECONOMIZER WB CONTROL: N  
TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7646

AHU NUMBER: AHU-6

AHU LOCATION: MER 3RD FLR. EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ155

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-350192-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7646

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



##### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS



##### CONVERTER

CONVERTER TAG:  
CONVERTER TYPE:  
CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: CAT. M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1 PUMP HP: 0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL:

#### HW PUMP

PUMP TAG: 2 PUMP HP: 0.75

PUMP MFG: GE

PUMP SERVICE: HW PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

---

**HW PUMP**

---

PUMP TAG:	3	PUMP HP:	0.75	PUMP MFG:	GE
PUMP SERVICE:	HW PUMP			PUMP MODEL:	

---

**HW PUMP**

---

PUMP TAG:	4	PUMP HP:	0.75	PUMP MFG:	GE
PUMP SERVICE:	HW PUMP			PUMP MODEL:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7646

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE  
UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,000  
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7646 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: ALL  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD805	# OF TOWER FANS:	4
CHILLER SERIAL NO:	2 STAGES 135A ea.	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	135	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	84		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7648 BLDG NAME: ENL BARRACKS W/O DIN  
ELECTRIC METER: N CONDITIONED SQFT: 41,892  
GAS METER: Y  
SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
PRES STOP:	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>
REQ START:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
REQ STOP:	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7648	AHU LOCATION:	MER 1ST FLR EAST
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	HALF OF 1ST FLOOR
		% OF BLDG AREA HEATED:	16.7
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	2
CFM-HTG:	5,044	CFM-CLG:	5,044
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	TEMTROL	UNIT MODEL:	BX135
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	U.S. ELECTRIC	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	184T	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	10	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:			
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7648

AHU NUMBER: AHU-2

AHU LOCATION: MER 1ST FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 1ST FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BX135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: U.S. ELECTRIC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7648

AHU NUMBER: AHU-3

AHU LOCATION: MER 2ND FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 2ND GLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BL 184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7648  
AHU NUMBER: AHU-4 AHU LOCATION: MER 2ND FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 2ND FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044 CFM-CLG: 5,044  
MIN %OA: 0 MAX %OA: 0

## NAMEPLATE

UNIT MFG: TEMTROL UNIT MODEL: BZ135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: BL184T RET/EXH FAN MTR MODEL:  
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7648

AHU NUMBER: AHU-5

AHU LOCATION: MER 3RD FLR. EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ155

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIPT:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7648

AHU NUMBER: AHU-6

AHU LOCATION: MER 3RD FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ155

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7648

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE  
UNIT MODEL: CAT. M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000  
BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:   
RESET CONTROLS: Y  
CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:   
PUMP SERVICE: HW PUMP PUMP MODEL:

### HW PUMP

PUMP TAG: PUMP HP: PUMP MFG:   
PUMP SERVICE: PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7648

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW



☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE:



☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,606,400

BLR CAP INPUT (BTUH): 2,008,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7648

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP:

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7648

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐☐ **BOILER**

BOILER TAG: HWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-2

PUMP HP:

2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7648

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: HWP-3 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> CENTRAL PLANT DIRECT	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:   
UNIT MODEL:   
COMMENTS:   
BLR CAP OUTPUT (BTUH):   
BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS:   
OPERATING SETPOINT:   
TYPE OF BURNER CONTROLS:   
RESET CONTROLS: N  
CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: HWP-3 PUMP HP: 2 PUMP MFG:   
PUMP SERVICE: HW PUMP PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7648 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: ALL  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD805	# OF TOWER FANS:	3
CHILLER SERIAL NO:	7995-2	TOWER FAN V:	230
CHILLER V:	208	TOWER FAN AMPS:	7.2
CHILLER AMPS:	135	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	84		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATORS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650  
AHU NUMBER: AHU-1 AHU LOCATION: MER 1ST FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 1ST FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044  
MIN %OA: 0

CFM-CLG: 5,044  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: BX135  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: U.S. ELECTRIC RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 184T RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650

AHU NUMBER: AHU-2

AHU LOCATION: MER 1ST FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 1ST FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BX135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: U.S. ELECTRIC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650

AHU NUMBER: AHU-3

AHU LOCATION: MER 2ND FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 2ND FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

MIN %OA: 0

CFM-CLG: 5,044

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: RL184T

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650

AHU NUMBER: AHU-4

AHU LOCATION: MER 2ND FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 2ND FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 5,044

CFM-CLG: 5,044

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: BZ135

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: BZ135

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650  
AHU NUMBER: AHU-5 AHU LOCATION: MER 3RD FLR EAST  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALF OF 3RD FLOOR  
% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900 CFM-CLG: 6,900  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL UNIT MODEL: MZ155  
SUPPLY FAN HP: 10 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6-350192-03 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650

AHU NUMBER: AHU-6

AHU LOCATION: MER 3RD FLR EAST

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALF OF 3RD FLOOR

% OF BLDG AREA HEATED: 16.7

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 6,900

CFM-CLG: 6,900

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TEMTROL

UNIT MODEL: MZ155

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-350192-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7650

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: CHW

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE  
UNIT MODEL: CAT. M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000  
BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 0 DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG: GE  
PUMP SERVICE: HW PUMP PUMP MODEL: 5K37PN70

### HW PUMP

PUMP TAG: 2 PUMP HP: 0.75 PUMP MFG: GE  
PUMP SERVICE: HW PUMP PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS****HW PUMP**

PUMP TAG:

3

PUMP HP:

0.75

PUMP MFG:

GE

PUMP SERVICE:

HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

4

PUMP HP:

0.75

PUMP MFG:

GE

PUMP SERVICE:

HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7650

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,000

BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7650 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: ALL  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9488-1	TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	30
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	45	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	SC-213-FMA-6-310206-01

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

Suspect ACM is located on pipe fittings and boiler.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7652

AHU NUMBER: AHU-1

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 1

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: VAH-22

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C 92M47

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7652

AHU NUMBER: AHU-2

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 2

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: VAH-22

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C'92M47

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7652  
AHU NUMBER: AHU-3 AHU LOCATION: STORAGE ROOM  
REFRIG SYS # SRVNG AHU: SERVES AREA: OFFICE AREA 3  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 CFM-CLG: 940  
MIN %OA: 20 MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH UNIT MODEL: VAH-22  
SUPPLY FAN HP: 0.75 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6C'92M47 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7652	AHU LOCATION:	STORAGE ROOM
AHU NUMBER:	AHU-4		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	OFFICE AREA 4
		% OF BLDG AREA HEATED:	0
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	0	CFM-CLG:	940
MIN %OA:	20	MAX %OA:	20

**NAMEPLATE**

UNIT MFG:	DUNHAM BUSH	UNIT MODEL:	VAH-22
SUPPLY FAN HP:	0.75	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	6C'92M47	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	5	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input type="checkbox"/>	FEB: <input type="checkbox"/>	MAR: <input type="checkbox"/>	APR: <input type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input type="checkbox"/>	NOV: <input type="checkbox"/>	DEC: <input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/> N	MIXED AIR DMPR CONTROL:	<input type="checkbox"/> N
MAX OA DMPR CONTROL:	<input type="checkbox"/> N	ECONOMIZER DB CONTROL:	<input type="checkbox"/> N
RET AIR DMPR CONTROL:	<input type="checkbox"/> N	ECONOMIZER WB CONTROL:	<input type="checkbox"/> N
EXH AIR DMPR CONTROL:	<input type="checkbox"/> N	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/> N
		TIME CLOCK:	<input type="checkbox"/> N
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/> N
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7652

AHU NUMBER: AHU-5

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: VAH-22

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C92M47

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7652

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: OSAGE

UNIT MODEL: 40-5-201

BLR CAP OUTPUT (BTUH): 800,000

BLR CAP INPUT (BTUH): 1,000,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 5

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 130 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7652	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERIMETER OF BLDG
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	MAGNETEK
				PUMP MODEL:	8-165775-01

### SCHEDULE

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: ☒ N

CONTROL COMMENTS: 3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 7652 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, 2, 3, 4, & 5  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SC2CS15  
CHILLER SERIAL NO: 9129-7  
CHILLER V: 230  
CHILLER AMPS: 62  
CHILLER PH: 3  
CHILLER CAP (TONS): 15

TOWER MFG: TSI  
# OF TOWER FANS: 2  
TOWER FAN V: 230  
TOWER FAN AMPS: 2.2  
TOWER FAN HP: 0.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: Y

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7654

BLDG NAME: ENL PERS DIN

ELECTRIC METER: N

CONDITIONED SQFT: 13,493

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER FLUE AND PIPE FITTINGS.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7654  
AHU NUMBER: AHU-1 AHU LOCATION: MEZZ  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: DINNING  
% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000  
MIN %OA: 30

CFM-CLG: 7,000  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 70 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 70 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 70 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7654

AHU NUMBER: AHU-2

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: DINNING

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250

CFM-CLG: 7,250

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 60

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7654

AHU NUMBER: HRU-1

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE HEAT RECOVERY UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 3

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 60

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7654

AHU NUMBER: HRU-2

AHU LOCATION: ABOVE CEILING KITCHEN

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEAT RECOVERY UNIT

NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 3,600

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 1

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7654

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE

UNIT MODEL: A-250

BLR CAP OUTPUT (BTUH): 6,900,000

BLR CAP INPUT (BTUH): 8,625,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7654

BOILER RM LOCATION: MEZZ

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

☐

☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

17

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

0

BLR CAP INPUT (BTUH):

0

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

23

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP:

1.5

PUMP MFG: U.S. ELECTRICAL

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: AJN

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7654

BLDG NAME: ENL PERS DIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): AHU-1, 2

AHU'S SERVED:

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD805  
CHILLER SERIAL NO: 7995-4  
CHILLER V: 208  
CHILLER AMPS: 135  
CHILLER PH: 3  
CHILLER CAP (TONS): 71

TOWER MFG: TSI  
# OF TOWER FANS: 6  
TOWER FAN V: 208  
TOWER FAN AMPS: 25  
TOWER FAN HP: 1

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 23

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1

PUMP HP: 5

PUMP MFG: DAYTON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: 2N937-H

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7656

BLDG NAME: GEN INST BLDG

ELECTRIC METER: ☒ Y

CONDITIONED SQFT: 13,493

GAS METER: ☒ YSUSPECT ACM: ☐ N**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 61

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	23	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	23	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7656

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: WEST HALF OF BLDG.

% OF BLDG AREA HEATED: 50

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 7,000

MIN %OA: 15

CFM-CLG: 7,000

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HW	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 62

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? Y

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7656  
AHU NUMBER: AHU-2 AHU LOCATION: MEZZANINE MER  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: EAST HALF OF BLDG.  
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE MULTI ZONE NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 7,000  
MIN %OA: 15

CFM-CLG: 7,000  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: MCQUAY UNIT MODEL: LML114EH  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MAGNETEK RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6-3556253-02 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 62 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 70  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 60  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 69  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: Y MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? Y  
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7656

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: PAWNEE

UNIT MODEL: A-250

BLR CAP OUTPUT (BTUH): 6,900,000

BLR CAP INPUT (BTUH): 8,265,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 61

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	23	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	23	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 207 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7656

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

61

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	23	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	23	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

RESET CONTROLS:

N

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-1

PUMP HP:

2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7656

BLDG NAME: GEN INST BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU-1,2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD70  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 135  
CHILLER PH: 3  
CHILLER CAP (TONS): 73.8

TOWER MFG: TSI  
# OF TOWER FANS: 6  
TOWER FAN V: 208  
TOWER FAN AMPS: 4.8  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 62

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 3

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: YJ182TTDR5326AB

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7658 BLDG NAME: ADMIN & SUPPORT BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: Y  
CONDITIONED SQFT: 13,520

## BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 5

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

Building Contact: Sgt. Thornton @ Ext. 5213. suspect ACM is located on pipe fittings and boiler.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CVWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7658

AHU NUMBER: AHU-1

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 1

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: VAH-22

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C192M47

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: Thermostat modulates control valve.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7658  
AHU NUMBER: AHU-2 AHU LOCATION: STORAGE ROOM  
REFRIG SYS # SRVNG AHU: Serves AREA: OFFICE AREA 2  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 CFM-CLG: 940  
MIN %OA: 20 MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH UNIT MODEL: BAH-22  
SUPPLY FAN HP: 0.75 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6C192M47 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS: Thermostat modulates control valve.

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7658	AHU LOCATION:	STORAGE ROOM
AHU NUMBER:	AHU-3		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	OFFICE AREA 3
		% OF BLDG AREA HEATED:	0
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	0	CFM-CLG:	940
MIN %OA:	20	MAX %OA:	20

## NAMEPLATE

UNIT MFG:	DUNHAM BUSH	UNIT MODEL:	VAH-22
SUPPLY FAN HP:	0.75	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	MARATHON	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	6C192M47	RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	5	MONTH SCHEDULE NO:	2									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:	Thermostat modulates control valve.				

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7658

AHU NUMBER: AHU-4

AHU LOCATION: STORAGE ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICE AREA 4

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 940

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH

UNIT MODEL: VAH-22

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C192M47

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: Thermostat modulates control valve.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7658  
AHU NUMBER: AHU-5 AHU LOCATION: STORAGE ROOM  
REFRIG SYS # SRVNG AHU: SERVES AREA: OFFICE AREA 5  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 CFM-CLG: 940  
MIN %OA: 20 MAX %OA: 20

**NAMEPLATE**

UNIT MFG: DUNHAM BUSH UNIT MODEL: VAH-22  
SUPPLY FAN HP: 0.75 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6C192M47 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 5 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS: Thermostat modulates control valve.



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7658

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

100

BOILER MFG: OSAGE

UNIT MODEL: 40-5-201

BLR CAP OUTPUT (BTUH):

800,000

BLR CAP INPUT (BTUH):

1,000,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

5

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 130 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7658	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERMIETER OF BLDG.
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	P14G3161M-FT

**SCHEDULE**

DAYS SCHEDULE NO:	5	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7658 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, 2, 3, 4, & 5  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	COPELAMETIC	TOWER MFG:	AIRCON MCQUAY
CHILLER MODEL:	9RS1-1500-THC	# OF TOWER FANS:	3
CHILLER SERIAL NO:	CTC821-01206	TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	62	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	15		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 45 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: Y TEMP GAUGES: N  
CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: SC-184-KMH-6-302053

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7665

BLDG NAME: DENTAL CLINIC

ELECTRIC METER: N

CONDITIONED SQFT: 11,076

GAS METER: N

SUSPECT ACM: N

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

### REMARKS:

Building was remodeled in 1990. Building contact: Michelle Brethour @ Ext: 4332

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7665

AHU NUMBER: AHU-1

AHU LOCATION: BASEMENT MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 19,500

CFM-CLG: 19,500

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: U.S. AIR CO

UNIT MODEL: BMZ-224

SUPPLY FAN HP: 15

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	STEAM	<input checked="" type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 72

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 72

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 72

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 72

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7665

BOILER RM LOCATION: BASEMENT AREA

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: LOW PRESS STEAM (<15#)  
FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE

UNIT MODEL: 3R51G

BLR CAP OUTPUT (BTUH): 648,000

BLR CAP INPUT (BTUH): 810,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7665 BLDG NAME: DENTAL CLINIC  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): BASEMENT MER  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH COOLING TOWER

**NAMEPLATE**

CHILLER MFG:	COPELAMETIC	TOWER MFG:	MARLEY AQUATOWER
CHILLER MODEL:	4RH1-2500-TSK	# OF TOWER FANS:	1
CHILLER SERIAL NO:	CTC82B01746	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	88.5	TOWER FAN HP:	5
CHILLER PH:	3		
CHILLER CAP (TONS):	50		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: MARATHON  
PUMP SERVICE: COND WATER PUMP (CNW) PUMP MODEL: KVD184-FL7027ACW

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/8/94

PREPARED BY: AJNCWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/8/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJNCWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7670

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE DOUBLE DUCT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 25,405

CFM-CLG: 25,405

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: JOHN ZINK CO

UNIT MODEL: 76-155-1

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	STEAM	<input checked="" type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: TIME CLOCK NON OPERABLE

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/8/94  
PREPARED BY: AJNCWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7670

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: EL-30-G-WEB

BLR CAP OUTPUT (BTUH): 782,000

BLR CAP INPUT (BTUH): 1,308,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/8/94  
PREPARED BY: AJNCWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7670

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

☐ **BOILER**

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE: BLR-1



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: NOT AVAILABLE

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/8/94  
PREPARED BY: AJNCWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7670 BLDG NAME: DENTAL CLINIC  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	30GB090	# OF TOWER FANS:	8
CHILLER SERIAL NO:	Q794171	TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	3
CHILLER AMPS:	45	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	83		

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7720

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: N

CONDITIONED SQFT: 22,325

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720  
AHU NUMBER: AHU-1 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394G-AZ048100  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**DAY SCHEDULE NO: 32  
SCHEDULE COMMENTS:

MONTH SCHEDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0

HOT DECK DEG F: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: NMIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: AHU-4

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES./BAYS

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720  
AHU NUMBER: MAU-1  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120  
CFM-CLG: 0  
MIN %OA: 100  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS  
UNIT MODEL: GTDM400  
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: MAU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: MAU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7720

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7720  
AHU NUMBER: RAD-2  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0  
CFM-CLG: 0  
MAX %OA: 0

## NAMEPLATE

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.33  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: CWWW/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7739 BLDG NAME: MVNG TRGT SIM BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: Y  
CONDITIONED SQFT: 4,074

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7739	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	ALL
		% OF BLDG AREA HEATED:	80
AHU UNIT TYPE	MULTI ZONE	NUMBER OF ZONES IF MZ UNIT:	3
CFM-HTG:	7,064	CFM-CLG:	7,064
MIN %OA:	15	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	TRANE	UNIT MODEL:	CLIMATE CHANG
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	U.S. ELCTRICAL	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	A907	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	11	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	Y				

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7739

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

20

BOILER MFG: CRANE CO.

UNIT MODEL: 200-385

BLR CAP OUTPUT (BTUH):

308,000

BLR CAP INPUT (BTUH):

385,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

11

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

0.08

PUMP MFG: MARATHON

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: CWW/AJN

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7739 BLDG NAME: MVNG TRGT SIM BLDG  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: MAINT. STORAGE ROOM, OFFIC  
SOURCE OF HEATING: SERVES AREA:  
RADIATION UNIT TYPE: HW % AREA HTG: 20

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 0.08 PUMP MFG:  
PUMP MODEL:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC  
RADIATION CONTROL:  
OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0 RESET CONTROL: N  
CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: CWW/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7739 BLDG NAME: MVNG TRGT SIM BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): EAST EXTERIOR OF BL  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUA-2006MA	# OF TOWER FANS:	3
CHILLER SERIAL NO:	3H-16081	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	5.8
CHILLER AMPS:	89	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	20		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/10/94  
PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7760 BLDG NAME: VEH MNT SHOP ORG  
ELECTRIC METER: N  
GAS METER: Y  
SUSPECT ACM: N  
CONDITIONED SQFT: 17,163

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 30

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/10/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

MIN %OA: 30

CFM-CLG: 0

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760

AHU NUMBER: AHU-2

AHU LOCATION: MEZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/10/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760  
AHU NUMBER: AHU-3 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 0  
MIN %OA: 30 MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED RESIDENTIAL FURANCE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: R THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/10/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760  
AHU NUMBER: AHU-4 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 0  
MIN %OA: 30 MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394FAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 11/10/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/10/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7760  
AHU NUMBER: MAU-3 AHU LOCATION: BAYS  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: BAYS  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 30 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7760

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 30

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/10/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7760	AHU LOCATION:	MAINT. BAYS
AHU NUMBER:	RAD-2		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	MAINT. BAYS
		% OF BLDG AREA HEATED:	16
AHU UNIT TYPE	INFRARED RADIANT HEATERS	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	0	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.33	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	30	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	18	18	18	18	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="15"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED:

7

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780  
AHU NUMBER: AHU-2  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT  
UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780  
AHU NUMBER: AHU-3 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780

AHU NUMBER: AHU-4

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 39GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780  
AHU NUMBER: AHU-6 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780

AHU NUMBER: MAU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780  
AHU NUMBER: MAU-2  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120  
CFM-CLG: 0  
MIN %OA: 100  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KILNG AIR SYSTEMS  
UNIT MODEL: GTDM400  
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NINE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780

AHU NUMBER: MAU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7780

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7780

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7802 BLDG NAME: ADMIN & SUPPORT BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 13,280

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7802

AHU NUMBER: FC-1

AHU LOCATION: ADMIN

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE 2 PIPE FC

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,500

MIN %OA: 0

CFM-CLG: 6,500

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7802

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: MER



☒ **BOILER**

BOILER TAG: BLR

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



☐ **CENTRAL PLANT DIRECT**

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BUNHAM

BLR CAP OUTPUT (BTUH): 770

UNIT MODEL: 4FL9240GWEB

BLR CAP INPUT (BTUH): 963

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 135 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE:  
PREPARED BY:

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7802	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	STORAGE
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	

### RADIATION PUMP

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG: CENTURY  
PUMP MODEL: 5K43KG4497

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC

RADIATION CONTROL:

OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS: 3 WAY CONTROL VALVE CONTROLS HW TEMP.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7802

BLDG NAME: ADMIN &amp; SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: 30AOC515  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 14.4

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 208  
TOWER FAN AMPS: 52.5  
TOWER FAN HP: 1

COMMENTS: DUAL TEMP SYSTEM

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="6"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="6"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

### REMARKS:

SUSPECT ACM LOCATED ON BOILER FLUE

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7804

AHU NUMBER: AHU-1

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: DINNING

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000

CFM-CLG: 7,000

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH

UNIT MODEL: HAH-80

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-322465-01

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 70

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 70

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 70

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7804  
AHU NUMBER: AHU-2 AHU LOCATION: MEZZ  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: DINNING  
% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250 CFM-CLG: 7,250  
MIN %OA: 30 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH UNIT MODEL: HAH-80  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: BALDOR RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 60 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7804

AHU NUMBER: HV-1

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH

UNIT MODEL: HAH-80

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 60

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7804

AHU NUMBER: HV-2

AHU LOCATION: ABOVE CEILING KITCHEN

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,600

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH

UNIT MODEL: HAH-32

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C145TTDR7033B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7804

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: MED PRESS STEAM (15# TO 125#) FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> CENTRAL PLANT DIRECT	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE

UNIT MODEL: A-250

BLR CAP OUTPUT (BTUH): 6,900,000

BLR CAP INPUT (BTUH): 8,625,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7804

BOILER RM LOCATION: MEZZ

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE: ☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH): 2,200,000

BLR CAP INPUT (BTUH): 2,200,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 23

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7804 BLDG NAME: ENL PERS DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, 2  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	MCQUAY PERTEX
CHILLER MODEL:	SC2CD80S	# OF TOWER FANS:	6
CHILLER SERIAL NO:	7995-4	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	3
CHILLER AMPS:	25	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 23 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	DAYTON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	2N937-H

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7806  
AHU NUMBER: AHU-1 AHU LOCATION: MEZZ  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: ADMINISTRATIVE  
% OF BLDG AREA HEATED: 32

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,400 CFM-CLG: 6,400  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE CLIMATE CHANGER UNIT MODEL: L-14  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: MARATHON ELEC RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 7D182TTF57028A RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 25 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 90 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? Y  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7806

AHU NUMBER: AHU-2

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMINISTRATIVE

% OF BLDG AREA HEATED: 32

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,600

CFM-CLG: 6,600

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE CIMATE CHANGER

UNIT MODEL: L-14

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 7E182TTF57028A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 25

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 90

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? Y

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7806

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

36

BOILER MFG: OSAGE

UNIT MODEL: 3-5-1023

BLR CAP OUTPUT (BTUH):

818,400

BLR CAP INPUT (BTUH):

1,023,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 25

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7806

BOILER RM LOCATION: MEZZ

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILERBOILER TAG: BOILER TYPE: FUEL TYPE: ☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: BLR-1



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

36

BOILER MFG: BUNHAM/BUSH

UNIT MODEL: SCA-63-2-1

BLR CAP OUTPUT (BTUH):

830,000

BLR CAP INPUT (BTUH):

830,000

COMMENTS: Year built: May 1969

**SCHEDULE**

DAYS SCHEDULE NO:

25

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 2-Way control valve

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7806	BLDG NAME:	BN HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	BLDG PERIMETER
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	36

**RADIATION PUMP**

PUMP TAG:	HP-1	PUMP HP:	0.75	PUMP MFG:	BALDOR
				PUMP MODEL:	

**SCHEDULE**

DAYS SCHEDULE NO:	25	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	20	20	20	20	20	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	PNEUMATIC		
RADIATION CONTROL:	3-WAY VALVE HW RESET AT BOILER/CONVERTER		
OCC HT SPACE SP:	0	RESET CONTROL:	N
UNOCC HT SPACE SP:	0		
CONTROL COMMENTS:	Perimeter radiation under windows with manual control valves		



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7806 BLDG NAME: BN HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, AHU-2  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9836-3	TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	270	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 25 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y TEMP GAUGES: ☐ Y

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: CENTURY  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: 6-322801-01

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM-AMS

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7808 BLDG NAME: ADMIN & SUPPORT BLDG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 13,280

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 33

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM-AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7808	AHU LOCATION:	ADMIN
AHU NUMBER:	FC-1	SERVES AREA:	ADMIN
REFRIG SYS # SRVNG AHU:	CH-1	% OF BLDG AREA HEATED:	37
AHU UNIT TYPE		FAN COILS - 2 PIPE	
NUMBER OF ZONES IF MZ UNIT:		0	
CFM-HTG:	6,500	CFM-CLG:	6,500
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	33	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	N
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM-AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7808

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT ☒ BLR/CONVERTER SERVES AREA OR SERVICE: ☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE: ☐ **CENTRAL PLANT DIRECT****NAMEPLATE**% AREA HEATED BY BB RADIATION:  0

BOILER MFG: BURNHAM

UNIT MODEL: 809BWI

BLR CAP OUTPUT (BTUH): 411,000

BLR CAP INPUT (BTUH): 528,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 33

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 125 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM-AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7808

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: FC'S

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO:

33

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS:

N

DEG F or PSIG

### HW PUMP

PUMP TAG:

1

PUMP HP:

0.75

PUMP MFG:

CENTURY

PUMP SERVICE:

DUAL TEMP PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM-AMS

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7808	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	STORAGE
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	63

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	
				PUMP MODEL:	

### SCHEDULE

DAYS SCHEDULE NO:	33	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC
RADIATION CONTROL:	
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	N
CONTROL COMMENTS:	

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM-AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7808

BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: FC-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: TSI  
CHILLER MODEL: 30A0CS15  
CHILLER SERIAL NO:  
CHILLER V: 208  
CHILLER AMPS: 52.5  
CHILLER PH: 3  
CHILLER CAP (TONS): 14.4

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 1

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 33

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CVWW/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7810 BLDG NAME: ENL BARRACKS W/O DIN  
ELECTRIC METER: Y CONDITIONED SQFT: 41,843  
GAS METER: Y  
SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

Suspect ACM located on DHW storage tanks



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7810

AHU NUMBER: AHU-1

AHU LOCATION: MER NORTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-33-1260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CVWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7810  
AHU NUMBER: AHU-2  
AHU LOCATION: MER SOUTH  
REFRIG SYS # SRVNG AHU: CH-1  
SERVES AREA: HALLWAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500  
MIN %OA: 100  
CFM-CLG: 3,500  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM  
UNIT MODEL: L0815  
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 8-331260-03  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7810

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7810

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: DHW



##### BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

##### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,200

BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7810

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

**HW PUMP**

PUMP TAG:  PUMP HP:  PUMP MFG:   
PUMP SERVICE:  PUMP MODEL:

**HW PUMP**

PUMP TAG:  PUMP HP:  PUMP MFG:   
PUMP SERVICE:  PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7810

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7810

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-3 BOILER TYPE: FUEL TYPE:  <input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE: 
---	---

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-3

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7810

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-4

PUMP HP: 3

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7810	BLDG NAME:	ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

**SCHEDULE**

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3 WAY PNEUMATIC CONTROL VALVE IM MER

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7810 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU'S & FC'S  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	7.2
CHILLER AMPS:	300	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

## CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 1.5 PUMP MFG: AURORA  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**BUILDING SCHEDULE NO: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON HW STORAGE TANKS.

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7812

AHU NUMBER: AHU-1

AHU LOCATION: MER NORTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-33-1260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7812

AHU NUMBER: AHU-2

AHU LOCATION: MER SOUTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7812

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HIGH PRESS STEAM (ABOVE 125#)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7812

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: DHW



##### BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

##### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 242,400

BLR CAP INPUT (BTUH): 290,880

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7812

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

0

BLR CAP INPUT (BTUH):

0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7812

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: \_\_\_\_\_

OPERATING SETPOINT: \_\_\_\_\_

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

RESET CONTROLS: ☐ N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7812

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-3

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7812

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ BOILER

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-4

PUMP HP: 3

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7812	BLDG NAME:	ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: ☒ N

CONTROL COMMENTS: 3 WAY PNEUMATIC CONTROL VALVE IN MER FOR HW

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7812

BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU & FC

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD70  
CHILLER SERIAL NO: 9836-1  
CHILLER V: 208  
CHILLER AMPS: 300  
CHILLER PH: 0  
CHILLER CAP (TONS): 73.5

TOWER MFG: BOHN  
# OF TOWER FANS: 4  
TOWER FAN V: 208  
TOWER FAN AMPS: 7.2  
TOWER FAN HP: 3

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: AURORA

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

ACM abatement has been completed.

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7814

AHU NUMBER: AHU-1

AHU LOCATION: MER NORTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-33-1260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP. WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7814  
AHU NUMBER: AHU-2 AHU LOCATION: MER SOUTH  
REFRIG SYS # SRVNG AHU: CH-2 SERVES AREA: HALLWAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 CFM-CLG: 3,500  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM UNIT MODEL: L0815  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 8-331260-03 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	DUAL TEMP WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7814

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7814

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

**BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 1,939,200

BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7814

BOILER RM LOCATION: MER

#### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT



☒ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

#### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7814

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7814

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-3

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7814

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

### HW PUMP

PUMP TAG: DTWP-4

PUMP HP: 3

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7814	BLDG NAME:	ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

**SCHEDULE**

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	3 WAY PNEUMATIC CONTROL VALVE IN MER



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7814

BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU'S &amp; FC'S

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD70  
CHILLER SERIAL NO: 9836-1  
CHILLER V: 208  
CHILLER AMPS: 300  
CHILLER PH: 0  
CHILLER CAP (TONS): 70

TOWER MFG: BOHN  
# OF TOWER FANS: 4  
TOWER FAN V: 208  
TOWER FAN AMPS: 7.2  
TOWER FAN HP: 1.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: AURORA

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON STEAM PIPING

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE:

LOCATION: FT. RILEY, KS

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7816

AHU NUMBER: AHU-1

AHU LOCATION: MER NORTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHUM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-33-1260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7816

AHU NUMBER: AHU-2

AHU LOCATION: MER SOUTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7816

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG:

BLR-1

BOILER TYPE:

HW (UP TO 250 DEG)

FUEL TYPE:

NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE

UNIT MODEL: M-235-KX

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7816

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:** DHW☐ **BOILER**

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 60-15

BLR CAP OUTPUT (BTUH): 242,400

BLR CAP INPUT (BTUH): 290,880

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7816

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7816

BOILER RM LOCATION: MER

### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-2 BOILER TYPE: FUEL TYPE:  <input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE: 
---	---

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:   
UNIT MODEL:   
COMMENTS:

BLR CAP OUTPUT (BTUH):   
BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:   
OPERATING SETPOINT:   
TYPE OF BURNER CONTROLS:   
CONTROLS COMMENTS:

RESET CONTROLS: N

### HW PUMP

PUMP TAG: DTWP-2 PUMP HP: 2 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: 5C-184-KMA



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7816

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☒ JUN: ☒ JUL: ☒ AUG: ☒ SEP: ☒ OCT: ☒ NOV: ☒ DEC: ☒

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

### HW PUMP

PUMP TAG: DTWP-3

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7816

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ ☐ **BOILER**  
BOILER TAG: DTWP-4  
BOILER TYPE: \_\_\_\_\_  
FUEL TYPE: \_\_\_\_\_

☐ ☐ **CONVERTER**  
CONVERTER TAG: \_\_\_\_\_  
CONVERTER TYPE: \_\_\_\_\_  
CONV HT SOURCE: \_\_\_\_\_

☐ **CENTRAL PLANT DIRECT**

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_  
UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_  
BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: \_\_\_\_\_ RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: DTWP-4 PUMP HP: 3 PUMP MFG: CENTURY  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: \_\_\_\_\_

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7816	BLDG NAME:	ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

### SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:			
RADIATION CONTROL:	NONE		
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0		
	RESET CONTROL:	<input checked="" type="checkbox"/> N	
CONTROL COMMENTS:	3 WAY PNEUMATIC CONTROL VALVE IN MER FOR HW		

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7816

BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: AHU &amp; FC

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD70  
CHILLER SERIAL NO: 9836-1  
CHILLER V: 208  
CHILLER AMPS: 300  
CHILLER PH: 0  
CHILLER CAP (TONS): 73.5

TOWER MFG: BOHN  
# OF TOWER FANS: 4  
TOWER FAN V: 208  
TOWER FAN AMPS: 7.2  
TOWER FAN HP: 1.5

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10  
SCHEDULE COMMENTS:

MONTHS SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS: GAS METER

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1.5  
PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MFG: AURORA  
PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7818  
AHU NUMBER: AHU-1 AHU LOCATION: MER NORTH  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: HALLWAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL: K164838  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 8-331260-03 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 10 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: OTHER  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐ MIXED AIR DMPR CONTROL: ☐ IMPLEMENT DEMAND LIMIT CNTRLS? ☐  
MAX OA DMPR CONTROL: ☐ ECONOMIZER DB CONTROL: ☐ TIME CLOCK: ☐  
RET AIR DMPR CONTROL: ☐ ECONOMIZER WB CONTROL: ☐ TIME CLOCK OPERATIONAL? ☐  
EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7818

AHU NUMBER: AHU-2

AHU LOCATION: MER SOUTH

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: HALLWAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500

CFM-CLG: 3,500

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG: AIRTHERM

UNIT MODEL: L0815

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-331260-03

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 10

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: OTHER

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7818

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE

UNIT MODEL: 3-5-508

BLR CAP OUTPUT (BTUH): 2,350,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7818

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: DHW

**BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: OSAGE

UNIT MODEL: 3-5-265

BLR CAP OUTPUT (BTUH): 212,000

BLR CAP INPUT (BTUH): 254,400

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7818

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

BLR CAP OUTPUT (BTUH): 0

UNIT MODEL:

BLR CAP INPUT (BTUH): 0

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 5C-184-KMA

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7818

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 3

PUMP MFG: PACER

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 0941716004

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7818

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-3

PUMP HP:

3

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: 6-312509-01

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7818

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-4

PUMP HP: 3

PUMP MFG: PACER

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7818	BLDG NAME:	ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

**SCHEDULE**

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	0	0	0	0	0	0					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7818

BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: FAN COILS

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: SC2CD70  
CHILLER SERIAL NO: 9836-1  
CHILLER V: 208  
CHILLER AMPS: 112  
CHILLER PH: 3  
CHILLER CAP (TONS): 73.8

TOWER MFG:  
# OF TOWER FANS: 6  
TOWER FAN V: 208  
TOWER FAN AMPS: 0.46  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 38

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CW-1 PUMP HP: 1.5  
PUMP SERVICE:

PUMP MFG:  
PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7820

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: N

CONDITIONED SQFT: 6,673

GAS METER: N

SUSPECT ACM: Y

## BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 24

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

## REMARKS:

SUSPECT ACM ON PIPING AND FITTINGS



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7820

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,490

CFM-CLG: 6,490

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7820

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX

UNIT MODEL: WG450

BLR CAP OUTPUT (BTUH): 360,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 24

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: CENTURY

PUMP SERVICE: HW PUMP

PUMP MODEL: 8-332736-GR

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7820

BLDG NAME: BN ADMIN & CLRM

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT

### NAMEPLATE

CHILLER MFG: TSI

CHILLER MODEL: 502CS25

CHILLER SERIAL NO:

CHILLER V: 208

CHILLER AMPS: 0

CHILLER PH: 0

CHILLER CAP (TONS): 20.5

TOWER MFG: TSI

# OF TOWER FANS: 2

TOWER FAN V: 208

TOWER FAN AMPS: 4.8

TOWER FAN HP: 1

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 24

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 101194

PREPARED BY: JM

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

### REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 101194

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7824

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES/CLASSROOMS

% OF BLDG AREA HEATED: 28

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 4,818

CFM-CLG: 4,818

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-10

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LINCOLN

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: TV2547

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 101194

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7824

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 44

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 7,155

CFM-CLG: 7,155

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-14

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 101194

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7824

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES/CLASSROOMS

% OF BLDG AREA HEATED: 28

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 4,818

CFM-CLG: 4,818

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-10

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LINCOLN

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: TV2547

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 101194

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7824

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: THERMO-PAK

UNIT MODEL: GW-1125X

BLR CAP OUTPUT (BTUH):

900,000

BLR CAP INPUT (BTUH):

1,125,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 130 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

1

PUMP MFG: CENTURY

PUMP SERVICE: HW PUMP

PUMP MODEL: 6-312500-05



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 101194  
PREPARED BY: JM

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7824 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,3  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

## NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	CGACC806RLNJJ423ADGPWM	# OF TOWER FANS:	8
CHILLER SERIAL NO:	J92A80193	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	3
CHILLER AMPS:	162	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	71.3		

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

## CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	PACER
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	0041716025

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7826 BLDG NAME: CLINIC W/O BEDS  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: Y  
CONDITIONED SQFT: 3,841

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 12

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER AND AHU DUCTWORK

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7826

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 86

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 3,230

CFM-CLG: 3,230

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-8

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON ELEC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 2L184TSR27BBW

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 12 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 55

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7826

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 14

BOILER MFG: THERMO-PAK

UNIT MODEL: GWA-344X

BLR CAP OUTPUT (BTUH): 275,000

BLR CAP INPUT (BTUH): 344,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 12

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 130 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7826 BLDG NAME: CLINIC W/O BEDS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	TSI
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.8
CHILLER AMPS:	42.8	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	10		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 12 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	8	8	8	8	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7832

BLDG NAME: GYMNASIUM

ELECTRIC METER: N

CONDITIONED SQFT: 20,694

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 42

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

AHU NUMBER: FC-1

AHU LOCATION: WOMEN AND MENS SHOWER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SHOWERS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.12

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 62

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

AHU NUMBER: FC-2

AHU LOCATION: WOMENS AND MENS SHOWER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SHOWERS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.12

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 62

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

AHU NUMBER: HV-1

AHU LOCATION: GYMNASIUM CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

AHU NUMBER: HV-2

AHU LOCATION: GYMNASIUM CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

AHU NUMBER: HV-3

AHU LOCATION: GYMNASIUM CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

AHU NUMBER: HV-4

AHU LOCATION: GYMNASIUM CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: GYMNASIUM

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: STEAM

☒

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 42

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 70

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832  
AHU NUMBER: HV-5  
AHU LOCATION: GYMNASIUM CEILING  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: GYMNASIUM  
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,500  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 42  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 70  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: Y  
IMPLEMEN DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y  
ECONOMIZER DB CONTROL: N  
TIME CLOCK: N  
RET AIR DMPR CONTROL: Y  
ECONOMIZER WB CONTROL: N  
TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: LOCHINVAR

UNIT MODEL: PBN0250

BLR CAP OUTPUT (BTUH):

220,000

BLR CAP INPUT (BTUH):

250,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 42

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7832

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BLDG. HEAT

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-563A-40-G-PF

BLR CAP OUTPUT (BTUH):

4,720,000

BLR CAP INPUT (BTUH):

5,900,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

42

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	19	21	21	21	21	21	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 10 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AMS/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7834

BLDG NAME: REGIMENTAL HQ BLDG

ELECTRIC METER: Y

CONDITIONED SQFT: 9,904

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AMS/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7834

AHU NUMBER: FC-1

AHU LOCATION: THROUGHOUT BLDG.

REFRIG SYS # SRVNG AHU:

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200

CFM-CLG: 11,200

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AMS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7834

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: AJAX

UNIT MODEL: WGFD-700

BLR CAP OUTPUT (BTUH):

560,000

BLR CAP INPUT (BTUH):

700,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

2

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 170 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AMS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7834

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT ☐ BLR/CONVERTER SERVES AREA OR SERVICE: ☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE: FUEL TYPE: ☐ **CONVERTER**CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE: ☐

CENTRAL PLANT DIRECT

**NAMEPLATE**% AREA HEATED BY BB RADIATION: BOILER MFG: UNIT MODEL: BLR CAP OUTPUT (BTUH): BLR CAP INPUT (BTUH): COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS: RESET CONTROLS: OPERATING SETPOINT:  DEG F or PSIGTYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: BALDOR

PUMP SERVICE: DTW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AMS/AJN

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 7834 BLDG NAME: REGIMENTAL HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED:  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: CG30E  
CHILLER SERIAL NO: 591568  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 30  
TOWER MFG: TRANE  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 3  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 52 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: US ELEC.  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: C533

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7836

BLDG NAME: BN ADMIN & CLRM

ELECTRIC METER: N

CONDITIONED SQFT: 12,246

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7836

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES/CLASSROOMS

% OF BLDG AREA HEATED: 28

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 4,818

CFM-CLG: 4,818

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-10

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7836

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 44

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 7,155

CFM-CLG: 7,155

MIN %OA: 15

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-14

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7836

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES/ CLASS ROOMS

% OF BLDG AREA HEATED: 28

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 4,818

CFM-CLG: 4,818

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-10

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: LINCOLN

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: TV2547

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7836

BOILER RM LOCATION: MER

**BOILER UNIT**SOURCE OF BLDG HEAT **BLR/CONVERTER SERVES AREA OR SERVICE:** ALL**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:  
CONVERTER TYPE:  
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: THERMO PACK  
UNIT MODEL: GW-1125X

BLR CAP OUTPUT (BTUH): 900,000  
BLR CAP INPUT (BTUH): 1,125,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 2

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 130 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1 PUMP HP: 1  
PUMP SERVICE: HW PUMP

PUMP MFG: CENTURY  
PUMP MODEL: 6-312500-05

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7836 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1,2,3  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

### NAMEPLATE

CHILLER MFG: TRANE TOWER MFG:  
CHILLER MODEL: CGACC806RLNJJ423ADGPWM # OF TOWER FANS: 8  
CHILLER SERIAL NO: TOWER FAN V: 200  
CHILLER V: 200 TOWER FAN AMPS: 0  
CHILLER AMPS: 162 TOWER FAN HP: 1  
CHILLER PH: 0  
CHILLER CAP (TONS): 71.3  
COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 3 PUMP MFG: PACER  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: OOR17160HS

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7842

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: ☒

CONDITIONED SQFT: 41,843

GAS METER: ☒SUSPECT ACM: ☒**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

SUSPECT ACM LOCATED ON STEAM PIPING

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7842

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

BLR CAP OUTPUT (BTUH): 2,340,000

UNIT MODEL: 3-5-508

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 1 HP FORCED DRAFT FAN MOTOR ON BURNER

**HW PUMP**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F133

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7842

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: DHW

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 3-5-265

BLR CAP OUTPUT (BTUH): 212,000

BLR CAP INPUT (BTUH): 254,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: COND PUMP 1/2 HP

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7842

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: RESET CONTROL DISABLED

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: DAB0309

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7842

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 1

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: P63DAA3038

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7842

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-3 BOILER TYPE: _____ FUEL TYPE: _____	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: _____ CONVERTER TYPE: _____ CONV HT SOURCE: _____
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_ BLR CAP OUTPUT (BTUH): \_\_\_\_\_  
UNIT MODEL: \_\_\_\_\_ BLR CAP INPUT (BTUH): \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG  
TYPE OF BURNER CONTROLS: \_\_\_\_\_  
RESET CONTROLS: N  
CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: DTWP-3 PUMP HP: 5 PUMP MFG: US ELECTRIC  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: U032/R10R259R073F



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7842

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-4

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: U032/R10R259R073F

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7842 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: FAN COILS  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	SNYDER GENERAL
CHILLER MODEL:		# OF TOWER FANS:	10
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	4
CHILLER AMPS:	0	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	72.5		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	N	TEMP LITE HI:	N
PRESS LITE LOW:	N	TEMP LITE LOW:	N
PRESS GAUGES:	Y	TEMP GAUGES:	Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG: U.S. ELECTRIC  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AS/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7844

BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N

CONDITIONED SQFT: 41,843

GAS METER: N

SUSPECT ACM: Y

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

### REMARKS:

SUSPECT ACM LOCATED ON STEAM PIPING

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7844

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 3-5-508

BLR CAP OUTPUT (BTUH): 2,340,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 1HP FORCED DRAFTG FAN MOTOR

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7844

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW



☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-240-40-LB

BLR CAP OUTPUT (BTUH): 407,100

BLR CAP INPUT (BTUH): 488,520

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 9 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 3/4 HP FAN MOTOR

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7844

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

BLR CAP OUTPUT (BTUH): 0

UNIT MODEL:

BLR CAP INPUT (BTUH): 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: DAB0309

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7844

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-2 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 1

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: P63DAA3038

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7844

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-3 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:   
UNIT MODEL:   
COMMENTS:   
BLR CAP OUTPUT (BTUH):   
BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
RESET CONTROLS: N  
CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-3 PUMP HP: 5 PUMP MFG: US ELECTRIC  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: U032/R10R259R073F



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7844

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-4

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: U032/R10R259RO73F

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7844 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: FAN COILS  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CB70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	58712223	TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7846

BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: Y

CONDITIONED SQFT: 41,843

GAS METER: Y

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

SUSPECT ACM LOCATED ON STEAM PIPING

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7846

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



##### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

##### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: 3-5-508

BLR CAP OUTPUT (BTUH): 2,340,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 1 HP FORCED DRAFT FAN MOTOR OLN BURNER

#### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F133

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7846

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW



##### BOILER

BOILER TAG: BLR-2  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS



##### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 3-5-265

BLR CAP OUTPUT (BTUH): 212,000

BLR CAP INPUT (BTUH): 254,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7846

BOILER RM LOCATION: MER

#### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: DAB0309

#### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7846

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 1

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: P63DAA3038

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7846

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ BOILER

BOILER TAG: DTWP-3

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-3

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: U632/R10R259R073F



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7846

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐**BOILER**

BOILER TAG: DTWP-4

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐**CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: DTWP-4

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: U632/R10R259R073F

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 7846 BLDG NAME: ENL BARRACKS W/AS  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: FAN COILS  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	MCQUAY	TOWER MFG:	SNYDER GENERAL
CHILLER MODEL:	WHR080D	# OF TOWER FANS:	10
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	4
CHILLER AMPS:	153	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	72.5		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ Y

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ Y

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2  
PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MFG: U.S. ELECTRI-P  
PUMP MODEL: P63DAC3040

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AS/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7848

BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N

CONDITIONED SQFT: 41,843

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7848

BOILER RM LOCATION: MER

### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: 3-5-508

BLR CAP OUTPUT (BTUH): 2,340,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7848

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-2 BOILER TYPE: MED PRESS STEAM (15# TO 125#) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE  
UNIT MODEL: 3-5-265

BLR CAP OUTPUT (BTUH): 212,000  
BLR CAP INPUT (BTUH): 254,400

COMMENTS: DHW BOILER

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7848

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**HW PUMP**

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7848

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-2

PUMP HP: 1

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7848

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-3 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:

BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-3 PUMP HP: 5 PUMP MFG:  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7848

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-4

PUMP HP:

5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AS/AJN

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7848 BLDG NAME: ENL BARRACKS W/O DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: FAN COILS  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	TDI
CHILLER MODEL:	SE2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	1-89-13965-3	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0.46
CHILLER AMPS:	112	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	73.8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 38 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON STEAM PIPING

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7850

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE

UNIT MODEL: 3-5-508

BLR CAP OUTPUT (BTUH): 2,340,000

BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 180 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 1 HP FORCED DRAFT BURNER FAN MOTORS ON EACH

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F133

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7850

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW



☒ BOILER

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE

UNIT MODEL: 3-5-265

BLR CAP OUTPUT (BTUH): 212,000

BLR CAP INPUT (BTUH): 254,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: CONDENSATE PUMP 1/2 HP LEAKING

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7850

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: DAB0309

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7850

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-3

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: V032/R10R259R073F

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7850

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐**BOILER**

BOILER TAG: DTWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-2

PUMP HP: 1

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: P63DAA3038



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7850

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: DTWP-4

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

### HW PUMP

PUMP TAG: DTWP-4

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: V032/R10R259R073F

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7850

BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED: FAN COILS

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: MCQUAY  
CHILLER MODEL: WHR080D  
CHILLER SERIAL NO: 5PF0189100  
CHILLER V: 0  
CHILLER AMPS: 153  
CHILLER PH: 0  
CHILLER CAP (TONS): 72.5

TOWER MFG: SNYDER GENERAL  
# OF TOWER FANS: 10  
TOWER FAN V: 208  
TOWER FAN AMPS: 4  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATORS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: Y

TEMP GAUGES: Y

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL: P63DAC3040

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7852

AHU NUMBER: FC-1

AHU LOCATION: ADMIN

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,500

MIN %OA: 0

CFM-CLG: 6,500

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7852

BOILER RM LOCATION:

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☒

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

☐ **CENTRAL PLANT DIRECT**

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

0

BOILER MFG: BURNHAM

UNIT MODEL: 4FL-63-45-LB

BLR CAP OUTPUT (BTUH):

469,000

BLR CAP INPUT (BTUH):

586,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO:

11

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 120 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7852

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

0

BLR CAP INPUT (BTUH):

0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

11

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

1.5

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7852 BLDG NAME: ADMIN & SUPPORT BLDG  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: STORAGE  
SOURCE OF HEATING: SERVES AREA:  
RADIATION UNIT TYPE: HW % AREA HTG: 63

### RADIATION PUMP

PUMP TAG: 1 PUMP HP: 0.5 PUMP MFG: CENTURY  
PUMP MODEL: 8-129386-0

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC  
RADIATION CONTROL:  
OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0  
RESET CONTROL: N  
CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7852

BLDG NAME: ADMIN &amp; SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE SOUTH

AHU'S SERVED: FC'S

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: TSI  
CHILLER MODEL: 30A0CS15  
CHILLER SERIAL NO: S-91-A22974  
CHILLER V: 208  
CHILLER AMPS: 52.5  
CHILLER PH: 3  
CHILLER CAP (TONS): 14.4

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V:  
TOWER FAN AMPS:  
TOWER FAN HP: 1

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: NONE

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: N

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: Y

OTHER INDICATIONS:

CONTROLS COMMENTS:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7852 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED:  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	HAMC-40485V	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	24.4	TOWER FAN HP:	0.25
CHILLER PH:	0		
CHILLER CAP (TONS):	5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATORS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWWW/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7854

BLDG NAME: BN HQ BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 13,493

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 25

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7854

AHU NUMBER: AHU-1

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 32

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,400

CFM-CLG: 6,400

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE CLIMATE CHANGER

UNIT MODEL: L-14

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON ELEC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 7D182HGS7028AA

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 25

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 90

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7854

AHU NUMBER: AHU-2

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU:

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 32

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,600

CFM-CLG: 6,600

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE CLIMATE CHARGER

UNIT MODEL: L-14

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 7E182TFS7028A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 25

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 90

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7854

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:



#### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:  
CONVERTER TYPE:  
CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

36

BOILER MFG: OSAGE

UNIT MODEL: 3-5-1023

BLR CAP OUTPUT (BTUH):

818,400

BLR CAP INPUT (BTUH):

1,023,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

25

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 7.5 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER:	7854	BLDG NAME:	BN HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	BLDG PERIMETER
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	36

**RADIATION PUMP**

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	BALDOR
				PUMP MODEL:	

**SCHEDULE**

DAYS SCHEDULE NO:	25	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	5	5	5	5	5	0					
REQ STOP:	0	20	20	20	20	20	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS:	PNEUMATIC		
RADIATION CONTROL:	3-WAY VALVE HW RESET AT BOILER/CONVERTER		
OCC HT SPACE SP:	0	RESET CONTROL:	N
UNOCC HT SPACE SP:	0		
CONTROL COMMENTS:			

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW/AJN

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7854 BLDG NAME: BN HQ BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU 1&2  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9836-3	TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	270	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		

COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 25 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ Y  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ Y  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

## CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 5  
PUMP SERVICE: CW PUMP (Chilled Water)  
PUMP MFG: CENTURY  
PUMP MODEL: 6-322801-01

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="6"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="6"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

SUSPECT ACM LOCATED ON BOILER FLUE.



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7856	AHU LOCATION:	MEZZ
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	DINNING
		% OF BLDG AREA HEATED:	35
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0

CFM-HTG: 7,000  
MIN %OA: 30

CFM-CLG: 7,000  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:	DUNHAM/BUSH	UNIT MODEL:	HAH-80
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	CENTURY	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	6-322465-01	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	23	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	6	5	5	5	5	5	6					
REQ STOP:	24	24	24	24	24	24	24					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	70	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	70	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	70	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	70	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input checked="" type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7856  
AHU NUMBER: AHU-2 AHU LOCATION: MEZZ  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: DINNING  
% OF BLDG AREA HEATED: 35

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250 CFM-CLG: 7,250  
MIN %OA: 30 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAMN/BUSH UNIT MODEL: HAH-80  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: BALDOR RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 60 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7856

AHU NUMBER: HV-1

AHU LOCATION: MEZZ

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 20

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: 11400

UNIT MODEL: 0

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 60

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7856

AHU NUMBER: HV-2

AHU LOCATION: ABOVE CEILING KITCHEN

REFRIG SYS # SRVNG AHU:

SERVES AREA: KITCHEN

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,600

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: DUNHAM/BUSH

UNIT MODEL: HAH-32

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6C145TTDR7033B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 23

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7856

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:



#### BOILER

BOILER TAG: BLR-1  
BOILER TYPE: MED PRESS STEAM (15# TO 125#)  
FUEL TYPE: NAT. GAS

#### CONVERTER

CONVERTER TAG:   
CONVERTER TYPE:   
CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE

UNIT MODEL: A-250

BLR CAP OUTPUT (BTUH): 6,900,000

BLR CAP INPUT (BTUH): 8,625,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7856

BOILER RM LOCATION: MEZZ

### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

SOURCE OF BLDG HEAT

☐

☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 2,200,000

BLR CAP INPUT (BTUH): 2,200,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 23

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 1.5

PUMP MFG: U.S. ELECTRICAL

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7856 BLDG NAME: ENL PERS DIN  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1, 2  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TSI	TOWER MFG:	MCQUAY PERTEX
CHILLER MODEL:	SC2CD80S	# OF TOWER FANS:	6
CHILLER SERIAL NO:	7995-4	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	25
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	71		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 23 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 5 PUMP MFG: DAYTON  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: 2N937-H

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7858

BLDG NAME: ADMIN &amp; SUPPORT BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 13,280

GAS METER: N

SUSPECT ACM: Y

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

**REMARKS:**

SUSPECT ACM LOCATED ON HW EXPANSION TANK



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7858

AHU NUMBER: FC-1

AHU LOCATION: ADMIN

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ADMIN

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,500

CFM-CLG: 6,500

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 7858 BLDG NAME: ADMIN & SUPPORT BLDG  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: STORAGE  
SOURCE OF HEATING: SERVES AREA:  
RADIATION UNIT TYPE: HW % AREA HTG: 63

**RADIATION PUMP**

PUMP TAG: 1 PUMP HP: 0.75 PUMP MFG: GE  
PUMP MODEL: 5K43KG4497

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: PNEUMATIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7858 BLDG NAME: ADMIN & SUPPORT BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: FC-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG: TSI TOWER MFG:   
CHILLER MODEL: 30A0CS15 # OF TOWER FANS: 2  
CHILLER SERIAL NO: TOWER FAN V:   
CHILLER V: 208 TOWER FAN AMPS:   
CHILLER AMPS: 52.5 TOWER FAN HP: 11  
CHILLER PH: 0  
CHILLER CAP (TONS): 14.4  
COMMENTS:

## SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:   
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/4/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="8"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>
REQ STOP:	<input type="text" value="22"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="22"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="12"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/4/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7865

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: NAVE

% OF BLDG AREA HEATED: 55

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,000

CFM-CLG: 10,000

MIN %OA: 22

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: U S ELECTRIC

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: A907/S07S125R01

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 40

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/4/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7865

AHU NUMBER: FC-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES/ ACTIVITY ROOM

% OF BLDG AREA HEATED: 45

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,390

CFM-CLG: 4,390

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.75

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HW	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 40

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7865

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

**BOILER**

BOILER TAG: BLR-1  
BOILER TYPE: HW (UP TO 250 DEG)  
FUEL TYPE: NAT. GAS

**CONVERTER**

CONVERTER TAG: \_\_\_\_\_  
CONVERTER TYPE: \_\_\_\_\_  
CONV HT SOURCE: \_\_\_\_\_



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: THERMO-PAK

BLR CAP OUTPUT (BTUH): 900,000

UNIT MODEL: GW-11-25X

BLR CAP INPUT (BTUH): 1,125,000

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 40

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 145 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG: CENTURY

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7865

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

40

MONTH SECHDULE NO:

2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP:

2

PUMP MFG: CENTURY

PUMP SERVICE: DUAL TEMP WATER

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7865 BLDG NAME: UNIT CHAPEL  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER  
AHU'S SERVED: FC-1  
UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	BOHN
CHILLER MODEL:	CG150	# OF TOWER FANS:	3
CHILLER SERIAL NO:	591571	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	56	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	12		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 40 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/4/94  
PREPARED BY: JM/AJN/AMS

## REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7865 BLDG NAME: UNIT CHAPEL  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

## NAMEPLATE

CHILLER MFG:		TOWER MFG:	TRANE
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	2.3
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	30		
COMMENTS:			

## SCHEDULE

DAYS SCHEDULE NO: 40 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7866

BLDG NAME: THEATER W/DRESS RM

ELECTRIC METER: N

CONDITIONED SQFT: 11,098

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 50

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7866

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: AUDITORIUM/STAGE

% OF BLDG AREA HEATED: 90

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,500

CFM-CLG: 14,500

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: TYPE 25

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: GE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 5K215AD205B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 50

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7866  
AHU NUMBER: AHU-2 AHU LOCATION: PROJECTION ROOM  
REFRIG SYS # SRVNG AHU: ACCU-1 SERVES AREA: PROJECTION ROOM  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 1,800  
MIN %OA: 15 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 50 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: 0  
CONTROLS COMMENTS: 0

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7866

BOILER RM LOCATION: MER

#### BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: HW (UP TO 250 DEG) FUEL TYPE: NAT. GAS	<input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input type="radio"/> CENTRAL PLANT DIRECT	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AMERICAN STD.  
UNIT MODEL: PFA505

BLR CAP OUTPUT (BTUH): 786,000  
BLR CAP INPUT (BTUH): 982,500

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 50

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: Y

OPERATING SETPOINT: 125 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1 PUMP HP: 0.25 PUMP MFG: B & G  
PUMP SERVICE: HW PUMP PUMP MODEL: M95171

#### HW PUMP

PUMP TAG: 2 PUMP HP: 0.25 PUMP MFG: ARMSTRONG  
PUMP SERVICE: HW PUMP PUMP MODEL:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7866

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO:

50

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: N

DEG F or PSIG

### HW PUMP

PUMP TAG: HWP-1

PUMP HP:

1

PUMP MFG: U. S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F443200202

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 7866

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐☐ **BOILER**

BOILER TAG: HWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 50

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: HWP-2

PUMP HP:

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F443200201



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7866

BLDG NAME: THEATER W/DRESS RM

REF. UNIT NUMBER/TAG: ACCU-1

LOCATION (MER#): OUTSIDE/ROOF

AHU'S SERVED: AHU-2

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:   
CHILLER MODEL:   
CHILLER SERIAL NO:   
CHILLER V:  0  
CHILLER AMPS:  0  
CHILLER PH:  0  
CHILLER CAP (TONS):  5

TOWER MFG:   
# OF TOWER FANS:  1  
TOWER FAN V:  0  
TOWER FAN AMPS:  0  
TOWER FAN HP:  0.33

COMMENTS: 

### SCHEDULE

DAYS SCHEDULE NO: 50

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:  0CNWS SETPOINT:  0CWR SETPOINT:  0CNWR SETPOINT:  0PRESS LITE HI:  NTEMP LITE HI:  NOTHER INDICATIONS: PRESS LITE LOW:  NTEMP LITE LOW:  NPRESS GAUGES:  NTEMP GAUGES:  NCONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7866 BLDG NAME: THEATER W/DRESS RM  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	TRANE
CHILLER MODEL:		# OF TOWER FANS:	4
CHILLER SERIAL NO:	3H16170	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	7.3
CHILLER AMPS:	144	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	30		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 50 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	18	0	0	0	18	18	18
REQ STOP:	24	0	0	0	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7900 BLDG NAME: VEH MNT SHOP ORG  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 20,943

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900  
AHU NUMBER: AHU-1 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICE/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900  
AHU NUMBER: AHU-3 AHU LOCATION: NEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900

AHU NUMBER: AHU-4

AHU LOCATION: NEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICE/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900  
AHU NUMBER: AHU-5 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAY  
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEM

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7900	AHU LOCATION:	BAYS
AHU NUMBER:	MAU-3		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	BAYS
		% OF BLDG AREA HEATED:	10
AHU UNIT TYPE	MAKE-UP AIR UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	12,200	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	KING AIR SYSTEMS	UNIT MODEL:	
SUPPLY FAN HP:	7.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE ☐HEATING COIL: NONE ☐REHEAT COIL: NONE ☐HUMIDIFIER: NONE ☐COOLING COIL: NONE ☐**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7900  
AHU NUMBER: RAD-2 AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU: SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.33 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 124,553

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 55

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-1

SERVES AREA: OFFICES - WING A

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS - FIRES; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7920	AHU LOCATION:	MER
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:	ACCU-2	SERVES AREA:	OFFICES WING B
		% OF BLDG AREA HEATED:	2.5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,575	CFM-CLG:	1,575
MIN %OA:	10	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	2	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS FIRED; 45,000 BTUH INPUT; 36,700 BTUH OUTPUT		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	GAS	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	55	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-3

SERVES AREA: OFFICES - WING C

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: AHU-4

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-4

SERVES AREA: OFFICES - WING D

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS - FIRED; 27,000 BTUH INPUT; 21,600 OUTPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-5

SERVES AREA: OFFICES - WING E

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 10

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: ACCU-6

SERVES AREA: OFFICES - WING A

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200

CFM-CLG: 1,200

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920  
AHU NUMBER: AHU-7 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: ACCU-7 SERVES AREA: OFFICES - CENTRAL  
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,700 CFM-CLG: 3,700  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920  
AHU NUMBER: HV-1  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: SUPPLY - WING A  
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS FIRED; 439,000 BTUH INPUT; 352,000 BTUH OUTPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: HV-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SUPPLY - WING B

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: NONE

☐

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920

AHU NUMBER: HV-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SUPPLY - WING C

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 395,000 BTUH INPUT; 316,000 BTUH OUTPUT

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: HV-4

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SUPPLY - WING D

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 395,000 BTUH INPUT; 316,000 BTUH OUTPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: HV-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: SUPPLY - WING E

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: MAU-1

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: WING A

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,250

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 1,541,000 BTUH INPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: MAU-2

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: WING B

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 19,625

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: RELIANCE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 1,493,000 BTUH INPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: MAU-3

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: WING C

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,900

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 1,590,000 BTUH

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920  
AHU NUMBER: MAU-4 AHU LOCATION: BAY  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: WING D  
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,900  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS FIRED; 1,590,000 BTUH INPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7920	AHU LOCATION:	BAY
AHU NUMBER:	MAU-5		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	WING E
		% OF BLDG AREA HEATED:	2.5
AHU UNIT TYPE	MAKE-UP AIR UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	20,900	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	7.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS FIRED; 1,590,000 BTUH INPUT		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	55	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: MAU-6

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: CENTRAL

% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL: 5

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED; 1,101,000 BRHU INPUT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 7.6

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 7.6

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920  
AHU NUMBER: RAD-3  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 7.6

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920

AHU NUMBER: RAD-4

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 7.6

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 55 MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7920

AHU NUMBER: RAD-5

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 7.6

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920

AHU NUMBER: UH-1

AHU LOCATION: CEILING MOUNTED

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: CENTRAL

% OF BLDG AREA HEATED: 18

AHU UNIT TYPE GAS-FIRED UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,240

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: TOT. FOR 11 UHS; BTUH INPUT: 1,650,000; BTUH OUTPUT: 1,320,000

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 55

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAU-252-B	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 55 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐  
PRESS LITE LOW: ☐  
PRESS GAUGES: ☐

TEMP LITE HI: ☐  
TEMP LITE LOW: ☐  
TEMP GAUGES: ☐

OTHER INDICATIONS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
REF. UNIT NUMBER/TAG: ACCU-2 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAU-252-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 55 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐

TEMP LITE HI: ☐

OTHER INDICATORS:

PRESS LITE LOW: ☐

TEMP LITE LOW: ☐

PRESS GAUGES: ☐

TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7920

BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-3

LOCATION (MER#): ROOF

AHU'S SERVED: AHU-3

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38FGA30500  
CHILLER SERIAL NO:  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 3

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.25

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 55

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: N

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: N

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
REF. UNIT NUMBER/TAG: ACCU-4 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-4  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: HEAT WAVE TOWER MFG:  
CHILLER MODEL: CTD 904 # OF TOWER FANS: 1  
CHILLER SERIAL NO: TOWER FAN V: 0  
CHILLER V: 0 TOWER FAN AMPS: 0  
CHILLER AMPS: 0 TOWER FAN HP: 0.5  
CHILLER PH: 0  
CHILLER CAP (TONS): 4  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 55 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATORS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
REF. UNIT NUMBER/TAG: ACCU-5 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-5  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAU-252-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 55 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
REF. UNIT NUMBER/TAG: ACCU-6 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-6  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAU-252-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 55 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS  
REF. UNIT NUMBER/TAG: ACCU-7 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-7  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 55 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="15"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940  
AHU NUMBER: AHU-1 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600 CFM-CLG: 0  
MIN %OA: 30 MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7940	AHU LOCATION:	NEZZANINE
AHU NUMBER:	AHU-3		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	OFFICES/ BAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,800	CFM-CLG:	0
MIN %OA:	30	MAX %OA:	30

**NAMEPLATE**

UNIT MFG:	BRYANT	UNIT MODEL:	394GAZ048100
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED RESIDENTIAL FURNACE		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	7940	AHU LOCATION:	MEZZANINE
AHU NUMBER:	AHU-4		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	OFFICES/ BAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,800	CFM-CLG:	0
MIN %OA:	30	MAX %OA:	30

## NAMEPLATE

UNIT MFG:	BRYANT	UNIT MODEL:	394GAZ048100
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED RESIDENTIAL FURNACE		

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940  
AHU NUMBER: AHU-5 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200 CFM-CLG: 0  
MIN %OA: 30 MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 30

MAX %OA: 30

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED RESIDENTIAL FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940

AHU NUMBER: MAU-3

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7940

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7940

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 7960 BLDG NAME: VEH MNT SHOP ORG  
ELECTRIC METER: N CONDITIONED SQFT: 20,245  
GAS METER: N  
SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960

AHU NUMBER: AHU-4

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960  
AHU NUMBER: AHU-5  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT  
UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	7960	AHU LOCATION:	MER
AHU NUMBER:	AHU-6		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	OFFICES/BAYS
		% OF BLDG AREA HEATED:	13
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	4,600	CFM-CLG:	0
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	BRYANT	UNIT MODEL:	394GAZ048100
SUPPLY FAN HP:	1.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEM

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960  
AHU NUMBER: MAU-3 AHU LOCATION: BAYS  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: BAYS  
% OF BLDG AREA HEATED: 10  
AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0  
CFM-HTG: 12,200 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960  
AHU NUMBER: RAD-1 AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU: SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 7960  
AHU NUMBER: RAD-2  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.33  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

DATE: 10/11/94

PREPARED BY: JM/AJN

BLDG NUMBER:	8006	BLDG NAME:	ENL BARRACKS W/O DIN
ELECTRIC METER:	N	CONDITIONED SQFT:	22,700
GAS METER:	N		
SUSPECT ACM:	N		

**BUILDING SCHEDULE NO:** 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8006

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**% AREA HEATED BY BB RADIATION: BOILER MFG: UNIT MODEL: COMMENTS: BLR CAP OUTPUT (BTUH): 

650,000

BLR CAP INPUT (BTUH): 

650,000

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT:  DEG F or PSIGTYPE OF BURNER CONTROLS: CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8006

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH): 0

BLR CAP INPUT (BTUH): 0

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: F8074-01239L154R033

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8008

BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N

CONDITIONED SQFT: 11,549

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8008

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH): 325,000

BLR CAP INPUT (BTUH): 325,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**PUMP TAG: PUMP HP: PUMP MFG: PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8008

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: SPACE HEAT

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒**CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC/ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

1.5

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: F8074-01239L154R033

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="8"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="11"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8010

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,770

CFM-CLG: 2,770

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: L-6

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 2N934K

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 6

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:	8012	BLDG NAME:	ENL BARRACKS W/O DIN
ELECTRIC METER:	Y	CONDITIONED SQFT:	22,700
GAS METER:	N		
SUSPECT ACM:	N		

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

## REMARKS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8012

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 650,000

BLR CAP INPUT (BTUH): 650,000

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: \_\_\_\_\_

PUMP HP: \_\_\_\_\_

PUMP MFG: \_\_\_\_\_

PUMP SERVICE: \_\_\_\_\_

PUMP MODEL: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8012

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒ CENTRAL PLANT DIRECT**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 3

PUMP MFG: GOULD

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8014

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: 

BLR CAP OUTPUT (BTUH):

325,000

UNIT MODEL: 

BLR CAP INPUT (BTUH):

325,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**PUMP TAG: PUMP HP: PUMP MFG: PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8014

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒**CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="8"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="11"/>

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8020

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,770

CFM-CLG: 2,770

MIN %OA: 10

MAX %OA: 100

## NAMEPLATE

UNIT MFG: TRANE

UNIT MODEL: L-6

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 2N934R

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 6

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8021

BLDG NAME: ADMIN & SUPPORT BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 23,676

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 9

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021

AHU NUMBER: FC-1

AHU LOCATION: ABOVE CEILING

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ADMINISTRATIVE OFFICES

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,000

CFM-CLG: 18,000

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021  
AHU NUMBER: HV-1  
AHU LOCATION: SUPPLY ROOM  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY ROOM  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021

AHU NUMBER: HV-2

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021  
AHU NUMBER: HV-3  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

## NAMEPLATE

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 9  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021

AHU NUMBER: HV-4

AHU LOCATION: SUPPLY ROOM

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY ROOM

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021

AHU NUMBER: HV-5

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 9

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: 

BLR CAP OUTPUT (BTUH): 450,000

UNIT MODEL: 

BLR CAP INPUT (BTUH): 450,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 9

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS: 

RESET CONTROLS: N

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS: 

CONTROLS COMMENTS: O.A. TEMP HW RESET

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8021

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒**CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 9

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS: ☒ N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP:

2

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: WVM143TTDR5336AA



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8023

BLDG NAME: ADMIN & SUPPORT BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 23,676

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023

AHU NUMBER: FC-1

AHU LOCATION: ABOVE CEILING

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ADMIN OFFICES

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,000

CFM-CLG: 18,000

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023

AHU NUMBER: HV-1

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8023	AHU LOCATION:	SUPPLY AREA
AHU NUMBER:	HV-2		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	SUPPLY AREA
		% OF BLDG AREA HEATED:	12.6
AHU UNIT TYPE HEATING AND VENTILATING		NUMBER OF ZONES IF MZ UNIT: 0	
CFM-HTG:	2,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	4	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023  
AHU NUMBER: HV-3 AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU: SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 12.6  
AHU UNIT TYPE HEATING AND VENTILATING NUMBER OF ZONES IF MZ UNIT: 0  
CFM-HTG: 2,400 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023  
AHU NUMBER: HV-4  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 12.6  
AHU UNIT TYPE HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0  
CFM-HTG: 2,400  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023

AHU NUMBER: HV-5

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HTHW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH):

586,000

BLR CAP INPUT (BTUH):

586,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**TYPE OF BLR CONTROLS: 

RESET CONTROLS: N

OPERATING SETPOINT:

160 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: AJN/JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8023

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

4

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

DEG F or PSIG

TYPE OF BURNER CONTROLS:

RESET CONTROLS:

N

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/05/94

PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="18"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/05/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8025

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: N.W. CLASSROOMS

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0

CFM-CLG: 2,610

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-43

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EB145TTDR79227

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 31

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: CW control valve serves all 3 AHU's

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/05/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8025

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: CENTRAL CLASSROOMS

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 0

CFM-CLG: 4,850

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 31

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRL? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: CW control valve serves all 3 AHU's

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/05/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8025

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: EAST ADMIN &amp; CLASSROOMS

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0

CFM-CLG: 2,610

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-6

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EB145TTDR7927A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 31

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? Y

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS: CW control valve serves all 3 AHU's

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/05/94  
PREPARED BY: AJN/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8025

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ BOILERBOILER TAG: BOILER TYPE: FUEL TYPE: ☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: ☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: 

BLR CAP OUTPUT (BTUH): 780,000

UNIT MODEL: 

BLR CAP INPUT (BTUH): 780,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 31

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/05/94  
PREPARED BY: AJN/CWW

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	8025	BLDG NAME:	BN ADMIN & CLRM
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	ALL
SOURCE OF HEATING:	CV-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	0

### RADIATION PUMP

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	GOULD
				PUMP MODEL:	179260

### SCHEDULE

DAYS SCHEDULE NO:	31	MONTHS SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	18	18	18	18	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC
RADIATION CONTROL:	NONE
OCC HT SPACE SP:	0
UNOCC HT SPACE SP:	0
RESET CONTROL:	<input checked="" type="checkbox"/> N
CONTROL COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/05/94

PREPARED BY: AJN/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8025

BLDG NAME: BN ADMIN &amp; CLRM

REF. UNIT NUMBER/TAG: CWP-1

LOCATION (MER#):

AHU'S SERVED: AHU'S 1,2 &amp; 3

UNIT TYPE CENTRAL PLANT

**NAMEPLATE**

CHILLER MFG:

CHILLER MODEL:

CHILLER SERIAL NO:

CHILLER V: 0

CHILLER AMPS: 0

CHILLER PH: 0

CHILLER CAP (TONS): 0

TOWER MFG:

# OF TOWER FANS: 0

TOWER FAN V: 0

TOWER FAN AMPS: 0

TOWER FAN HP: 0

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 31

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8037

BLDG NAME: BN ADMIN &amp; CLRM

ELECTRIC METER: N

CONDITIONED SQFT: 12,000

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 38

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8037  
AHU NUMBER: AHU-1  
REFRIG SYS # SRVNG AHU: NONE  
AHU LOCATION: MER  
SERVES AREA: NW CLASSROOMS  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE  
NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0  
MIN %OA: 30  
CFM-CLG: 2,610  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE  
SUPPLY FAN HP: 2  
SUPPLY FAN MTR MFG: MARATHON  
SUPPLY FAN MTR MODEL: EB245TTDR7927A  
UNIT MODEL: MZ-6  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 38  
MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: Y  
ECONOMIZER DB CONTROL: Y  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8037

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: OFFICES/CLASSROOMS

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0

CFM-CLG: 4,850

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-10

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EC182TTDR767AB

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 38

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8037

AHU NUMBER: AHU-3

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: N.W. CLASSROOMS

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0

CFM-CLG: 2,610

MIN %OA: 30

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-6

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EB145TTDR7927A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 38

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JMAJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8037

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: UNIT MODEL: BLR CAP OUTPUT (BTUH): 

780,000

BLR CAP INPUT (BTUH): 

780,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 38

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT:  DEG F or PSIGTYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**

PUMP TAG: 1

PUMP HP: 

1.5

PUMP MFG: GOULD

PUMP SERVICE: 

PUMP MODEL: 179260

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JMAJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8037

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☒ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

100

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 38

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.75

PUMP MFG: U.S. ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: 6001292-763

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JMAJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8037 BLDG NAME: BN ADMIN & CLRM  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU'S 1,2 & 3  
UNIT TYPE CENTRAL PLANT

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 38 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 1 PUMP MFG: BELL AND GOSSETT  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL: 178028CP

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

### REMARKS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8038

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH): 650,000

BLR CAP INPUT (BTUH): 650,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**PUMP TAG: PUMP HP: PUMP MFG: PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8038

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: **8040** BLDG NAME: **ENL BARRACKS W/O DIN**  
ELECTRIC METER: **N** CONDITIONED SQFT: **11,549**  
GAS METER: **N**  
SUSPECT ACM: **N**

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: **0**

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<b>0</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>0</b>
PRES STOP:	<b>0</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>0</b>
REQ START:	<b>0</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>0</b>
REQ STOP:	<b>0</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>0</b>

**REMARKS:**

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8040

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☐ BOILER

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT



CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH):

325,000

BLR CAP INPUT (BTUH):

325,000

COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

#### HW PUMP

PUMP TAG: \_\_\_\_\_

PUMP HP: \_\_\_\_\_

PUMP MFG: \_\_\_\_\_

PUMP SERVICE: \_\_\_\_\_

PUMP MODEL: \_\_\_\_\_

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8040

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL



☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

**EMC NO: 1406-001**

DATE: 10/11/94

**PREPARED BY: AJN/JM**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8042

BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N

**CONDITIONED SQFT:** 22,700

**GAS METER:** N

SUSPECT ACM: ☒ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

## REMARKS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/JM

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8042

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

650,000

BLR CAP INPUT (BTUH):

650,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: AJN/JM

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8042

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP:

5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/10/94

PREPARED BY: JM/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: **8044** BLDG NAME: **APP INSTR BLDG**  
ELECTRIC METER: **N** CONDITIONED SQFT: **2,470**  
GAS METER: **N**  
SUSPECT ACM: **N**

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: **15**

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PRES STOP:	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>
REQ START:	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
REQ STOP:	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/10/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8044

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE RESIDENTIAL FURNACE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,500

CFM-CLG: 1,500

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: CARRIER SUPER SAVER

UNIT MODEL: 5888B080-CC-SER

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED FURNACE

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 15

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: DUAL SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8044	AHU LOCATION:	MER
AHU NUMBER:	AHU-2		
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	ALL
		% OF BLDG AREA HEATED:	100
AHU UNIT TYPE	RESIDENTIAL FURNACE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,500	CFM-CLG:	1,500
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:	CARRIER SUPER SAVER	UNIT MODEL:	5888B080-CC
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED FURNACE		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	15	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	7	7	7	7	7	7	7					
REQ STOP:	23	23	23	23	23	23	23					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	DUAL SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
OTHER CONTROLS DESCR:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/10/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8044 BLDG NAME: APP INSTR BLDG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU 1 & 2  
UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38BA009550  
CHILLER SERIAL NO: 0788C00291  
CHILLER V: 208  
CHILLER AMPS: 39.6  
CHILLER PH: 0  
CHILLER CAP (TONS): 8.5

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 3.6  
TOWER FAN HP: 0.31

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 15 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	7	7	7	7	7	7
REQ STOP:	23	23	23	23	23	23	23

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="8"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="21"/>	<input type="text" value="11"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8046

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,770

CFM-CLG: 2,770

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: L-6

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 2N934R

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 6

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:

BLDG NAME:

ELECTRIC METER:

CONDITIONED SQFT:

GAS METER:

SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8048

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 325,000

BLR CAP INPUT (BTUH): 325,000

COMMENTS: \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:

☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: \_\_\_\_\_

PUMP HP: \_\_\_\_\_

PUMP MFG: \_\_\_\_\_

PUMP SERVICE: \_\_\_\_\_

PUMP MODEL: \_\_\_\_\_



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8048

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8050

BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N

CONDITIONED SQFT: 11,549

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH): 325,000

BLR CAP INPUT (BTUH): 325,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**PUMP TAG: PUMP HP: PUMP MFG: PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8050

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐**CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒**CENTRAL PLANT DIRECT**

% AREA HEATED BY BB RADIATION:

**NAMEPLATE**

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP: 1.5

PUMP MFG:

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8052

BOILER RM LOCATION: MER

**BOILER UNIT**

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐☐ **BOILER**BOILER TAG: BOILER TYPE: FUEL TYPE: ☒ **CONVERTER**

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: UNIT MODEL: 

BLR CAP OUTPUT (BTUH): 650,000

BLR CAP INPUT (BTUH): 650,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: CONTROLS COMMENTS: **HW PUMP**PUMP TAG: PUMP HP: PUMP MFG: PUMP SERVICE: PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8052

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-1

PUMP HP: 5

PUMP MFG: US ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

### BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

### BUILDING OCCUPANCY SCHEDULE

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>

### REMARKS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8054

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH):

325,000

BLR CAP INPUT (BTUH):

325,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8054

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO:

10

MONTH SECHDULE NO:

3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:

OPERATING SETPOINT:

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

RESET CONTROLS:

N

DEG F or PSIG

**HW PUMP**

PUMP TAG: DTWP-1

PUMP HP:

1

PUMP MFG:

U.S. ELECTRIC

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL:

F8074-01239L154R033

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8056 BLDG NAME: DET DAY ROOM  
ELECTRIC METER: N  
GAS METER: N  
SUSPECT ACM: N  
CONDITIONED SQFT: 2,100

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 6

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8056

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,770

CFM-CLG: 2,770

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: L-6-SR-76E00435

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: DAYTON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 2N934K

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 6

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME:EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #:DACA 01-94-D-0033  
LOCATION:FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8057

**BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N

**CONDITIONED SQFT:** 23,676

**GAS METER:** N

SUSPECT ACM: ☐ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8057

AHU NUMBER: FC-1

AHU LOCATION: ABOVE CEILING

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: ADMIN OFFICES

% OF BLDG AREA HEATED: 37

AHU UNIT TYPE FAN COILS - 2 PIPE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,000

CFM-CLG: 18,000

MIN %OA: 20

MAX %OA: 20

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP:

RET/EXH FAN HP:

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8057	AHU LOCATION:	SUPPLY AREA
AHU NUMBER:	HV-1		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	SUPPLY AREA
		% OF BLDG AREA HEATED:	12.6
AHU UNIT TYPE	HEATING AND VENTILATING	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	2,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	4	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/>
		TIME CLOCK:	<input type="checkbox"/>
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/>

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8057  
AHU NUMBER: HV-2  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRL? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8057  
AHU NUMBER: HV-3  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8057

AHU NUMBER: HV-4

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8057

AHU NUMBER: HV-5

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8057

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL

<input type="radio"/> <b>BOILER</b> BOILER TAG: <input type="text"/> BOILER TYPE: <input type="text"/> FUEL TYPE: <input type="text"/>	<input checked="" type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CV-1 CONVERTER TYPE: STM TO HW CONV HT SOURCE: STEAM FROM CENTRAL PLANT
<input checked="" type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:   
UNIT MODEL:

BLR CAP OUTPUT (BTUH): 450,000  
BLR CAP INPUT (BTUH): 450,000

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS: 

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS:   
OPERATING SETPOINT: 160 DEG F or PSIG  
TYPE OF BURNER CONTROLS:

RESET CONTROLS: N

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8057

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

<input type="checkbox"/> <b>BOILER</b> BOILER TAG: DTWP-1 BOILER TYPE: FUEL TYPE:	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:
<input checked="" type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:  
UNIT MODEL:

BLR CAP OUTPUT (BTUH):  
BLR CAP INPUT (BTUH):

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 4 MONTH SECHDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: RESET CONTROLS: N  
OPERATING SETPOINT: DEG F or PSIG  
TYPE OF BURNER CONTROLS:  
CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: DTWP-1 PUMP HP: 1 PUMP MFG: MARATHON  
PUMP SERVICE: DUAL TEMP PUMP PUMP MODEL: WVM143TTDR5336AA

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8059

BLDG NAME: ADMIN &amp; SUPPORT BLDG

ELECTRIC METER: N

CONDITIONED SQFT: 23,676

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

**REMARKS:**

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	8059	AHU LOCATION:	ABOVE CEILING
AHU NUMBER:	FC-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	ADMIN OFFICES
		% OF BLDG AREA HEATED:	37
AHU UNIT TYPE	FAN COILS - 2 PIPE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	18,000	CFM-CLG:	18,000
MIN %OA:	20	MAX %OA:	20

## NAMEPLATE

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	4	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input checked="" type="checkbox"/>	JUN: <input checked="" type="checkbox"/>	JUL: <input checked="" type="checkbox"/>	AUG: <input checked="" type="checkbox"/>	SEP: <input checked="" type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/11/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8059

AHU NUMBER: HV-1

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8059

AHU NUMBER: HV-2

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8059	AHU LOCATION:	SUPPLY AREA
AHU NUMBER:	HV-3		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	SUPPLY AREA
		% OF BLDG AREA HEATED:	12.6
AHU UNIT TYPE		HEATING AND VENTILATING	
		NUMBER OF ZONES IF MZ UNIT: 0	
CFM-HTG:	2,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	4	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	6	6	6	6	6	0					
REQ STOP:	0	17	17	17	17	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8059  
AHU NUMBER: HV-4  
AHU LOCATION: SUPPLY AREA  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: SUPPLY AREA  
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRL? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/11/94

PREPARED BY: JM/AJN

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8059

AHU NUMBER: HV-5

AHU LOCATION: SUPPLY AREA

REFRIG SYS # SRVNG AHU:

SERVES AREA: SUPPLY AREA

% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 4

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8059

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG:

BOILER TYPE:

FUEL TYPE:

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

UNIT MODEL:

BLR CAP OUTPUT (BTUH): 586,000

BLR CAP INPUT (BTUH): 586,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS:

RESET CONTROLS: N

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/11/94  
PREPARED BY: JM/AJN

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8059

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: \_\_\_\_\_

☐☐ **BOILER**

BOILER TAG: DTWP-1

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ **CONVERTER**

CONVERTER TAG: \_\_\_\_\_

CONVERTER TYPE: \_\_\_\_\_

CONV HT SOURCE: \_\_\_\_\_

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): \_\_\_\_\_

BLR CAP INPUT (BTUH): \_\_\_\_\_

**SCHEDULE**

DAYS SCHEDULE NO: 4

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: \_\_\_\_\_

RESET CONTROLS: ☒ N

OPERATING SETPOINT: \_\_\_\_\_

DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**HW PUMP**

PUMP TAG: 1

PUMP HP: 1

PUMP MFG: MARATHON

PUMP SERVICE: DUAL TEMP PUMP

PUMP MODEL: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME:EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #:DACA 01-94-D-0033  
LOCATION:FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8063

BLDG NAME: ENL PERS DIN

ELECTRIC METER: ☒ Y

CONDITIONED SQFT: 18,313

**GAS METER:** N

SUSPECT ACM: ☒ N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 47

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	5	5	5	5	5	7
REQ STOP:	18	18	18	18	18	18	18

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8063

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: C. PLANT

SERVES AREA: KITCHEN/DINING

% OF BLDG AREA HEATED: 75

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 21,700

CFM-CLG: 21,700

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: N/A

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	<input checked="" type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 47

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	5	5	5	5	5	7
REQ STOP:	18	18	18	18	18	18	18

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8063

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: C. PLANT

SERVES AREA: DINING ROOM

% OF BLDG AREA HEATED: 25

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 41,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: L63

SUPPLY FAN HP: 15

RET/EXH FAN HP: 15

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: N/A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 47

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	5	5	5	5	5	7
REQ STOP:	18	18	18	18	18	18	18

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8063 BLDG NAME: ENL PERS DIN  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1  
UNIT TYPE CENTRAL PLANT

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 47 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	7	5	5	5	5	5	7
REQ STOP:	18	18	18	18	18	18	18

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATORS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N  
CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8065

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: C. PLANT

SERVES AREA: ALL

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 3,000

CFM-CLG: 3,000

MIN %OA: 32

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: MZ-6

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EC182TTDR7627A

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 1

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8065

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: AHU-1

☐

☐ BOILER

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☐ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 450,000

BLR CAP INPUT (BTUH): 450,000

COMMENTS: \_\_\_\_\_

### SCHEDULE

DAYS SCHEDULE NO: 1

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

### HW PUMP

PUMP TAG: 1

PUMP HP: 2

PUMP MFG: \_\_\_\_\_

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8065 BLDG NAME: CLINIC W/O BEDS  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1  
UNIT TYPE CENTRAL PLANT

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JMAJN.AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="9"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="12"/>	<input type="text" value="6"/>	<input type="text" value="9"/>
REQ STOP:	<input type="text" value="20"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="22"/>	<input type="text" value="20"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8069	AHU LOCATION:	MER
AHU NUMBER:	AHU-1		
REFRIG SYS # SRVNG AHU:	CENTRAL PLANT	SERVES AREA:	EXERCISE ROOM
		% OF BLDG AREA HEATED:	9
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	5,190	CFM-CLG:	5,190
MIN %OA:	5	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	CENTRAL AIRE	UNIT MODEL:	L1016
SUPPLY FAN HP:	3	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	CENTURY	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	6-322466-02	RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	54	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	10	9	9	9	9	9	9					
REQ STOP:	19	21	21	21	21	21	21					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	PNEUMATIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CENTRAL PLANT

SERVES AREA: RACQUETBALL COURTS

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,125

CFM-CLG: 2,125

MIN %OA: 5

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CENTRAL AIRE

UNIT MODEL: L0613

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 8-33257702

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069  
AHU NUMBER: HRU-1  
AHU LOCATION: SWIMMING POOL  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: SWIMMING POOL  
% OF BLDG AREA HEATED: 14  
AHU UNIT TYPE: HEAT RECOVERY UNIT  
NUMBER OF ZONES IF MZ UNIT: 0  
CFM-HTG: 9,000  
CFM-CLG: 0  
MIN %OA: 50  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 5  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 58  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069  
AHU NUMBER: HRU-2  
AHU LOCATION: SWIMMING POOL  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: SWIMMING POOL  
% OF BLDG AREA HEATED: 14

AHU UNIT TYPE: HEAT RECOVERY UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,000  
MIN %OA: 50  
CFM-CLG: 0  
MAX %OA: 100

## NAMEPLATE

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 5  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 58  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRL? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069

AHU NUMBER: HV-1

AHU LOCATION: BASKETBALL GYM

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BASKETBALL GYM

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750

CFM-CLG: 0

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL: L1420

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-322466-02

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☒RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069

AHU NUMBER: HV-2

AHU LOCATION: BASKETBALL GYM

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BASKETBALL GYM

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750

CFM-CLG: 0

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL: L1420

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: 6-322466-02

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069  
AHU NUMBER: HV-3  
AHU LOCATION: BASKETBALL GYM  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: BASKETBALL GYM  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750  
MIN %OA: 20

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL: L1420  
SUPPLY FAN HP: 3  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY  
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL: B-322466-02  
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069  
AHU NUMBER: HV-4 AHU LOCATION: BASKETBALL GYM  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: BASKETBALL GYM  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750 CFM-CLG: 0  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL: L1420  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: CENTURY RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 6-322466-02 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8069  
AHU NUMBER: HV-9  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: 1ST FLOOR LOCKER ROOMS  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CENTRAL AIRE  
UNIT MODEL: L1715  
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 1.5  
SUPPLY FAN MTR MFG: BALDOR  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: M3218T  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 54  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8069

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐ BOILER

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: \_\_\_\_\_

☒ CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 1,000,000

BLR CAP INPUT (BTUH): 1,000,000

COMMENTS: \_\_\_\_\_

### SCHEDULE

DAYS SCHEDULE NO: 58

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

### HW PUMP

PUMP TAG: 1

PUMP HP: 7.5

PUMP MFG: DOERR

PUMP SERVICE: HW PUMP

PUMP MODEL: 91720AE78T

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**PERIMETER RADIATION SURVEY OBSERVATIONS**

BLDG NUMBER: 8069 BLDG NAME: IN SW POOL/GYM  
PER RAD (SYSTEM TAG) NO: RAD-1 RAD SYS LOCATION: SWIMMING POOL  
SOURCE OF HEATING: CENTRAL PLANT DIRECT SERVES AREA: SWIMMING POOL  
RADIATION UNIT TYPE: HW % AREA HTG: 6

**SCHEDULE**

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF RAD. CONTROLS: ELECTRIC  
RADIATION CONTROL:  
OCC HT SPACE SP: 0  
UNOCC HT SPACE SP: 0  
RESET CONTROL: N  
CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8069 BLDG NAME: IN SW POOL/GYM  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED: AHU-1,2  
UNIT TYPE OTHER

**NAMEPLATE**

CHILLER MFG: TOWER MFG:  
CHILLER MODEL: # OF TOWER FANS: 0  
CHILLER SERIAL NO: TOWER FAN V: 0  
CHILLER V: 0 TOWER FAN AMPS: 0  
CHILLER AMPS: 0 TOWER FAN HP: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 0  
COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0  
PRESS LITE HI: N TEMP LITE HI: N OTHER INDICATIONS:  
PRESS LITE LOW: N TEMP LITE LOW: N  
PRESS GAUGES: N TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 7.5 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**CW and CNW PUMPS**

PUMP TAG: PUMP HP: PUMP MFG:  
PUMP SERVICE: PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: JMAJN.AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8069

BLDG NAME: IN SW POOL/GYM

REF. UNIT NUMBER/TAG: CWP-2

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE

**NAMEPLATE**

CHILLER MFG:

CHILLER MODEL:

CHILLER SERIAL NO:

CHILLER V: 0

CHILLER AMPS: 0

CHILLER PH: 0

CHILLER CAP (TONS): 0

COMMENTS:

TOWER MFG:

# OF TOWER FANS: 0

TOWER FAN V: 0

TOWER FAN AMPS: 0

TOWER FAN HP: 0

**SCHEDULE**

DAYS SCHEDULE NO: 54

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CWR SETPOINT: 0

CNWS SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CWP-2

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: JMAJN.AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8069 BLDG NAME: IN SW POOL/GYM  
REF. UNIT NUMBER/TAG: CWP-3 LOCATION (MER#): MER  
AHU'S SERVED:  
UNIT TYPE

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CWP-3 PUMP HP: 0.5 PUMP MFG:  
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/14/94  
PREPARED BY: AJN/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 11/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8071

AHU NUMBER: AHU-1

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: PLANT

SERVES AREA:

% OF BLDG AREA HEATED: 100

AHU UNIT TYPE MULTI ZONE

NUMBER OF ZONES IF MZ UNIT: 10

CFM-HTG: 12,450

CFM-CLG: 12,450

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE CLIMATE CHANGER

UNIT MODEL: MZ-17

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: MARATHON

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: EB215TTDR7359B

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	STEAM	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input checked="" type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 2

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 68

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 68

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 11/14/94  
PREPARED BY: AJN/CWW

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8071 BLDG NAME: RGT HQ BUILD  
REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER  
AHU'S SERVED:  
UNIT TYPE

### NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

### CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	B&G
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	M98550-E48



**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

DATE:

**PREPARED BY:**

## BUILDING DATA SURVEY OBSERVATIONS

**BLDG NUMBER:** 8073

BLDG NAME: CH ENERGY PLANT

ELECTRIC METER: N

**CONDITIONED SQFT:** 4,070

**GAS METER:** N

**SUSPECT ACM:** N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8073

BOILER RM LOCATION:

**BOILER UNIT**

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE:

<input checked="" type="radio"/> <b>BOILER</b> BOILER TAG: BLR-1 BOILER TYPE: FUEL TYPE:  <input type="radio"/> <b>CONVERTER</b> CONVERTER TAG: CONVERTER TYPE: CONV HT SOURCE:  <input type="radio"/> <b>CENTRAL PLANT DIRECT</b>
--

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: MOHAWK  
UNIT MODEL: 4-5-2502

BLR CAP OUTPUT (BTUH): 17,250,000  
BLR CAP INPUT (BTUH): 21,562,500

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC  
OPERATING SETPOINT: 100 DEG F or PSIG  
TYPE OF BURNER CONTROLS: O2 TRIM

RESET CONTROLS: N

CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE:  
PREPARED BY:

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8073

BOILER RM LOCATION:

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

☐

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: MED PRESS STEAM (15# TO 125#)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: MOHAWK

UNIT MODEL: 4-5-2502

BLR CAP OUTPUT (BTUH):

17,250,000

BLR CAP INPUT (BTUH):

21,562,500

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 10

MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 100 DEG F or PSIG

TYPE OF BURNER CONTROLS: O2 TRIM

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8073

BLDG NAME: CH ENERGY PLANT

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE ABSORPTION W/ WATER SIDE COOLING TOWER

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: ABSCO4F4S2C  
CHILLER SERIAL NO: L6C6175  
CHILLER V: 0  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 200

TOWER MFG: MARLEY  
# OF TOWER FANS: 2  
TOWER FAN V: 460  
TOWER FAN AMPS: 48.5  
TOWER FAN HP: 40

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CW-1 PUMP HP: 125  
PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MFG: AURORA  
PUMP MODEL: 449560

**CW and CNW PUMPS**

PUMP TAG: CNW-1 PUMP HP: 50  
PUMP SERVICE: COND WATER PUMP (CNW)

PUMP MFG:  
PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE:

PREPARED BY:

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8073

BLDG NAME: CH ENERGY PLANT

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): MER

AHU'S SERVED:

UNIT TYPE ABSORPTION W/ WATER SIDE COOLING TOWER

**NAMEPLATE**

CHILLER MFG: TRANE

TOWER MFG: MARLEY

CHILLER MODEL: ABSCO4FWS2C

# OF TOWER FANS: 1

CHILLER SERIAL NO: L6C6175

TOWER FAN V: 460

CHILLER V: 460

TOWER FAN AMPS: 48.5

CHILLER AMPS: 0

TOWER FAN HP: 40

CHILLER PH: 0

CHILLER CAP (TONS): 200

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 10

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: CW-1

PUMP HP: 125

PUMP MFG: AURORA

PUMP SERVICE: CW PUMP (Chilled Water)

PUMP MODEL:

**CW and CNW PUMPS**

PUMP TAG: CNW-1

PUMP HP: 50

PUMP MFG:

PUMP SERVICE: COND WATER PUMP (CNW)

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="16"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-1 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: AREA 1  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 CFM-CLG: 795  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.16 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: TRANE RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RAUA-3004-MD RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-10 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 2  
% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,500 CFM-CLG: 0  
MIN %OA: 40 MAX %OA: 100

## NAMEPLATE

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 64 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER:	8100	AHU LOCATION:	ROOF
AHU NUMBER:	AHU-11		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	AREA 5
		% OF BLDG AREA HEATED:	1
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	2,350	CFM-CLG:	0
MIN %OA:	30	MAX %OA:	100

## NAMEPLATE

UNIT MFG:	TRANE	UNIT MODEL:	PCCA-0704-1C-A
SUPPLY FAN HP:	1.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	GOULD	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO:	64	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	5	5	5	5	5	0					
PRES STOP:	0	19	19	19	19	19	0					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-12 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 6  
% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,000 CFM-CLG: 0  
MIN %OA: 20 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL: PCCA-0704-1C-AB  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: GOULD RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: 8-32578-01 RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-13

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 7

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 19,760

CFM-CLG: 0

MIN %OA: 20

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: PCCA 33041CEAH

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: TRANE

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-14 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 7  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,780 CFM-CLG: 0  
MIN %OA: 35 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 10 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-15 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 1  
% OF BLDG AREA HEATED: 3

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 23,000 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: EXTHERMICS UNIT MODEL:  
SUPPLY FAN HP: 20 RET/EXH FAN HP: 15  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8100	AHU LOCATION:	
AHU NUMBER:	AHU-16		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	AREA 4
		% OF BLDG AREA HEATED:	2
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	6,000	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:	EXOTHERMICS	UNIT MODEL:	1-8000 AL74
SUPPLY FAN HP:	5	RET/EXH FAN HP:	3
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	HEAT RECOVERY UNIT		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	11	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-17

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 1

% OF BLDG AREA HEATED: 3

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 23,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 20

RET/EXH FAN HP: 15

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-18 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: SERVES AREA: AREA 2  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,420 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 10 RET/EXH FAN HP: 7.5  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-19

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 3

% OF BLDG AREA HEATED: 3

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 23,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 20

RET/EXH FAN HP: 15

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-2

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: AREA 2

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 600

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.16

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8100	AHU LOCATION:	ROOF
AHU NUMBER:	AHU-20		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	AREA 3
		% OF BLDG AREA HEATED:	3
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	23,000	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	20	RET/EXH FAN HP:	15
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	HEAT RECOVERY UNIT		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	11	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	Y
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-21

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 4

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 15

RET/EXH FAN HP: 3

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-22

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 5

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 15,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 15

RET/EXH FAN HP: 10

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-23 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 5  
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 25,000 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 20 RET/EXH FAN HP: 15  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: HEAT RECOVERY UNIT

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8100	AHU LOCATION:	ROOF
AHU NUMBER:	AHU-24		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	AREA 2
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	MAKE-UP AIR UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	35,200	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	20	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:	KING NATIONAL A	RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:	MNGTDM 300/275	RET/EXH FAN MTR MODEL:	
COMMENTS:	OIL-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	11	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	7	7	7	7	7	0					
REQ STOP:	0	16	16	16	16	16	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-24(2)

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 2

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 35,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 20

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: KING NATIONA AI

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL: MNGTDM300/275

RET/EXH FAN MTR MODEL:

COMMENTS: OIL-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-25

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 7

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,500

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: MNGTDM85CRH

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG: CENTURY

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: OIL-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-26 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 1  
% OF BLDG AREA HEATED: 3

AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 19,600 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 15 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: OIL-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-27

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 1

% OF BLDG AREA HEATED: 1

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,000

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: OIL-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-3 AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: CH-3 SERVES AREA: AREA 3  
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 CFM-CLG: 600  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 0.16 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: 0  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: 0  
CONTROLS COMMENTS: 0

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-4

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: CH-4

SERVES AREA: AREA 4

% OF BLDG AREA HEATED: 0

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 1,000

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.16

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-5

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: CH-5

SERVES AREA: AREA 5

% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 725

CFM-CLG: 725

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.16

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-6

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: CH-6

SERVES AREA: AREA 6

% OF BLDG AREA HEATED: 3

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,045

CFM-CLG: 12,045

MIN %OA: 40

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL: CLIMATE CHANG

SUPPLY FAN HP: 15

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: AHU-7  
AHU LOCATION: ROOF  
REFRIG SYS # SRVNG AHU: CH-7  
SERVES AREA: AREA 7  
% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,790  
MIN %OA: 10

CFM-CLG: 3,790  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64  
MONTH SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-8

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU:

SERVES AREA: AREA 7

% OF BLDG AREA HEATED: 1

AHU UNIT TYPE VAV

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,295

CFM-CLG: 6,295

MIN %OA: 50

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	CW	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: AHU-9

AHU LOCATION: ROOF

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 1

% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000

CFM-CLG: 0

MIN %OA: 40

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 64

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	5	5	5	5	5	0
PRES STOP:	0	19	19	19	19	19	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: UH-1  
AHU LOCATION: AREA 1  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: AREA 1  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HW UNIT HEATER  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,440  
MIN %OA: 0  
CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE  
UNIT MODEL:  
SUPPLY FAN HP: 0.9  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
RET AIR DMPR CONTROL: N  
ECONOMIZER WB CONTROL: N  
EXH AIR DMPR CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: UH-2

AHU LOCATION: AREA 2

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 2

% OF BLDG AREA HEATED: 8

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 38,674

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: UH-3

AHU LOCATION: AREA 3

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 3

% OF BLDG AREA HEATED: 12

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 76,800

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 6

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: UH-4

AHU LOCATION: AREA 4

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 4

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 32,212

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 0.9

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: UH-5

AHU LOCATION: AREA 5

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 5

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,600

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 1.8

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: UH-6  
AHU LOCATION: AREA 6  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: AREA 6  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,730  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE  
SUPPLY FAN HP: 2.4  
SUPPLY FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
COMMENTS:  
UNIT MODEL:  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100  
AHU NUMBER: UH-7 AHU LOCATION: AREA 7  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: AREA 7  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE HW UNIT HEATER NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,650 CFM-CLG: 0  
MIN %OA: 0 MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE UNIT MODEL:  
SUPPLY FAN HP: 0.75 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

AHU NUMBER: UH-8

AHU LOCATION: AREA 8

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: AREA 8

% OF BLDG AREA HEATED: 1

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,324

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: TRANE

UNIT MODEL:

SUPPLY FAN HP: 0.25

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 11

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE

UNIT MODEL: L3W-150-KGO

BLR CAP OUTPUT (BTUH): 5,021,000

BLR CAP INPUT (BTUH): 6,278,000

COMMENTS:

#### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC/ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS: O2 TRIM

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-2

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE

UNIT MODEL: L3W-150-KGO

BLR CAP OUTPUT (BTUH):

5,021,000

BLR CAP INPUT (BTUH):

6,278,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: PNEUMATIC/ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 160 DEG F or PSIG

TYPE OF BURNER CONTROLS: O2 TRIM

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 0.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE 1

☐

☐ BOILER

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

#### NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

#### SCHEDULE

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

#### HW PUMP

PUMP TAG: 1

PUMP HP: 10

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE 2

☐☐ **BOILER**

BOILER TAG: HWP-2

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 2

PUMP HP: 10

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE 3

☐ **BOILER**

BOILER TAG: HWP-3

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 3

PUMP HP: 7.5

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ZONE 4

☐☐ **BOILER**

BOILER TAG: HWP-4

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

BLR CAP OUTPUT (BTUH):

UNIT MODEL:

BLR CAP INPUT (BTUH):

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 4

PUMP HP: 15

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:



## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

### BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8100

BOILER RM LOCATION: MER

#### BOILER UNIT

SOURCE OF BLDG HEAT \_\_\_\_\_ BLR/CONVERTER SERVES AREA OR SERVICE: MER

<input type="radio"/> <input type="checkbox"/> <b>BOILER</b> BOILER TAG: HWP-5 BOILER TYPE: _____ FUEL TYPE: _____	<input type="checkbox"/> <b>CONVERTER</b> CONVERTER TAG: _____ CONVERTER TYPE: _____ CONV HT SOURCE: _____
<input type="radio"/> <b>CENTRAL PLANT DIRECT</b>	

#### NAMEPLATE

% AREA HEATED BY BB RADIATION: \_\_\_\_\_

BOILER MFG: \_\_\_\_\_ BLR CAP OUTPUT (BTUH): \_\_\_\_\_  
UNIT MODEL: \_\_\_\_\_ BLR CAP INPUT (BTUH): \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

#### SCHEDULE

DAYS SCHEDULE NO: 11 MONTH SECHDULE NO: 1  
SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC  
OPERATING SETPOINT: \_\_\_\_\_ DEG F or PSIG  
TYPE OF BURNER CONTROLS: \_\_\_\_\_  
RESET CONTROLS: N  
CONTROLS COMMENTS: \_\_\_\_\_

#### HW PUMP

PUMP TAG: 5 PUMP HP: 15 PUMP MFG: \_\_\_\_\_  
PUMP SERVICE: HW PUMP PUMP MODEL: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-1  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUA-3004-MD	# OF TOWER FANS:	2
CHILLER SERIAL NO:	J81C-0505-03A	TOWER FAN V:	115
CHILLER V:	208	TOWER FAN AMPS:	2.6
CHILLER AMPS:	19.5	TOWER FAN HP:	0.33
CHILLER PH:	1		
CHILLER CAP (TONS):	4		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-2  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	19.5	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: N  
PRESS LITE LOW: N  
PRESS GAUGES: N

TEMP LITE HI: N  
TEMP LITE LOW: N  
TEMP GAUGES: N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): ZONE 3 NORTH  
AHU'S SERVED: AHU-3  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: TRANE  
CHILLER MODEL: SAHB-B202-A  
CHILLER SERIAL NO: C81C-31524  
CHILLER V: 208  
CHILLER AMPS: 19.5  
CHILLER PH: 1  
CHILLER CAP (TONS): 3

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.25

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-4 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-4  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	SAHB-B256-A	# OF TOWER FANS:	2
CHILLER SERIAL NO:	C81C-31529	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	15.1	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	3		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATORS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-5 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-5  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	15.1	TOWER FAN HP:	0.25
CHILLER PH:	3		
CHILLER CAP (TONS):	3		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATIONS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-6 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-6  
UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	30		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ N TEMP LITE HI: ☐ N OTHER INDICATIONS:  
PRESS LITE LOW: ☐ N TEMP LITE LOW: ☐ N  
PRESS GAUGES: ☐ N TEMP GAUGES: ☐ N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1 PUMP HP: 2 PUMP MFG:  
PUMP SERVICE: CHILLED WATER PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100 BLDG NAME: CONSOLIDATED MNT  
REF. UNIT NUMBER/TAG: CH-7 LOCATION (MER#): ROOF  
AHU'S SERVED: AHU-7  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	SACC-C104A	# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	480	TOWER FAN AMPS:	0
CHILLER AMPS:	33.1	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	15		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/CWW

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8100

BLDG NAME: CONSOLIDATED MNT

REF. UNIT NUMBER/TAG: CH-8

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-8

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

**NAMEPLATE**

CHILLER MFG:

CHILLER MODEL:

CHILLER SERIAL NO:

CHILLER V:

CHILLER AMPS:

CHILLER PH:

CHILLER CAP (TONS):

TOWER MFG:

# OF TOWER FANS:

TOWER FAN V:

TOWER FAN AMPS:

TOWER FAN HP:

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 11

MONTHS SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS:

**CW and CNW PUMPS**

PUMP TAG: 1

PUMP HP: 2

PUMP MFG:

PUMP SERVICE: CHILLED WATER

PUMP MODEL:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

**PREPARED BY: AJN/JM/AMS**

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8300

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: N

**CONDITIONED SQFT:** 20,240

**GAS METER:** N

**SUSPECT ACM:** N

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300  
AHU NUMBER: AHU-1  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT  
UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 1  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SETBACK  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300  
AHU NUMBER: AHU-2  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: RYANT  
UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:  
RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/ BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8300	AHU LOCATION:	MEZZANINE
AHU NUMBER:	AHU-4		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	OFFICES/BAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	1,800	CFM-CLG:	0
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	BRYANT	UNIT MODEL:	394GAZ048100
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300  
AHU NUMBER: AHU-6 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/ BAYS  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/12/94

PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTSEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300

AHU NUMBER: MAU-3

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/12/94  
PREPARED BY: AJN/JM/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8300  
AHU NUMBER: RAD-1  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0  
CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ N  
RET AIR DMPR CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N  
MIXED AIR DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N  
IMPLEMENT DEMAND LIMIT CNTRLS? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/12/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/JM/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8300

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

**PROJECT NAME:**EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
**CLIENT CNTRCT #:**DACA 01-94-D-0033  
**LOCATION:**FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
APPROVED BY: JM/AJN/AMS

## BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER:	8320	BLDG NAME:	VEH MNT SHOP ORG
ELECTRIC METER:	N	CONDITIONED SQFT:	20,240
GAS METER:	N		
SUSPECT ACM:	N		

## BUILDING OCCUPANCY SCHEDULE

**BUILDING SCHEDULE NO:** 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

## REMARKS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICE/BAYS

% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: AHU-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320  
AHU NUMBER: AHU-4 AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 CFM-CLG: 0  
MIN %OA: 15 MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT UNIT MODEL: 394GAZ048100  
SUPPLY FAN HP: 0.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED:

6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320  
AHU NUMBER: AHU-6  
REFRIG SYS # SRVNG AHU: NONE  
AHU LOCATION: MER  
SERVES AREA: OFFICES/BAYS  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600  
MIN %OA: 15  
CFM-CLG: 0  
MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT  
SUPPLY FAN HP: 1.5  
SUPPLY FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
COMMENTS: GAS-FIRED  
UNIT MODEL: 394GAZ048100  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: MAU-3

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320  
AHU NUMBER: RAD-1  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
TIME CLOCK: N  
RET AIR DMPR CONTROL: N  
ECONOMIZER WB CONTROL: N  
TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8320

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8330

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: N

CONDITIONED SQFT: 39,256

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 39

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8330  
AHU NUMBER: AHU-1 AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: OFFICES  
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,445 CFM-CLG: 3,455  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: CARRIER UNIT MODEL: 40RR012550  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8330

AHU NUMBER: HV-1

AHU LOCATION: RM 120

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,420

CFM-CLG: 0

MIN %OA: 32

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8330  
AHU NUMBER: MAU-1 AHU LOCATION: BAY  
REFRIG SYS # SRVNG AHU: NONE SERVES AREA: BAY  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,960 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP: OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8330

AHU NUMBER: MAU-2

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,755

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8330	AHU LOCATION:	MAINT-BAY EAST
AHU NUMBER:	UH-1		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	MINT. BAY EAST
		% OF BLDG AREA HEATED:	30
AHU UNIT TYPE	HW UNIT HEATER	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	22,000	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1.7	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	39	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/>	MIXED AIR DMPR CONTROL:	<input type="checkbox"/>	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/>
MAX OA DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER DB CONTROL:	<input type="checkbox"/>	TIME CLOCK:	<input type="checkbox"/>
RET AIR DMPR CONTROL:	<input type="checkbox"/>	ECONOMIZER WB CONTROL:	<input type="checkbox"/>	TIME CLOCK OPERATIONAL?	<input type="checkbox"/>
EXH AIR DMPR CONTROL:	<input type="checkbox"/>				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8330  
AHU NUMBER: UH-2

AHU LOCATION: MAINT. BAY WEST

REFRIG SYS # SRVNG AHU: NONT

SERVES AREA: MAINT BAY WEST

% OF BLDG AREA HEATED: 35

AHU UNIT TYPE HW UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 26,400

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 2 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: N ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8330

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT BLR/CONVERTER SERVES AREA OR SERVICE: ALL



#### BOILER

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS



#### CONVERTER

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



#### CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM

UNIT MODEL: 4FW-277-40-G

BLR CAP OUTPUT (BTUH): 2,318,000

BLR CAP INPUT (BTUH): 2,898,000

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 39

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: Y

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

### HW PUMP

PUMP TAG: 1

PUMP HP: 20

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: ME514T

### HW PUMP

PUMP TAG:

PUMP HP:

PUMP MFG:

PUMP SERVICE:

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8330

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: MAINT. BAYS

☐ **BOILER**

BOILER TAG: HWP-1

BOILER TYPE:

FUEL TYPE:

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐ **CENTRAL PLANT DIRECT****NAMEPLATE**

% AREA HEATED BY BB RADIATION:

BOILER MFG:

UNIT MODEL:

COMMENTS:

BLR CAP OUTPUT (BTUH):

BLR CAP INPUT (BTUH):

**SCHEDULE**

DAYS SCHEDULE NO: 39

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 7.5

PUMP MFG: BALDOR

PUMP SERVICE: HW PUMP

PUMP MODEL: 103311T

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8330 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AE012600	# OF TOWER FANS:	2
CHILLER SERIAL NO:	7696091	TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	2.3
CHILLER AMPS:	20	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	8		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0		
CWR SETPOINT:	0	CNWR SETPOINT:	0		
PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIONS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8340 BLDG NAME: VEH MNT SHOP ORG  
ELECTRIC METER: N CONDITIONED SQFT: 20,240  
GAS METER: N  
SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 32

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<u>0</u>	<u>0</u>	<u>0</u>	<u>18</u>	<u>0</u>	<u>0</u>	<u>0</u>
PRES STOP:	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>24</u>
REQ START:	<u>0</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>0</u>
REQ STOP:	<u>0</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>15</u>	<u>18</u>	<u>0</u>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: AHU-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 7

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: AHU-2

AHU LOCATION: MEZZNINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/16/94

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: AHU-3

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	GASN	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8340	AHU LOCATION:	MEZZANINE
AHU NUMBER:	AHU-4		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	OFFICES/BAYS
		% OF BLDG AREA HEATED:	5
AHU UNIT TYPE		NUMBER OF ZONES IF MZ UNIT:	
SINGLE ZONE		0	
CFM-HTG:	1,800	CFM-CLG:	0
MIN %OA:	15	MAX %OA:	15

**NAMEPLATE**

UNIT MFG:	BRYANT	UNIT MODEL:	394GAZ048100
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	18	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	9	9	7	9	0					
REQ STOP:	0	18	18	18	15	18	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:			
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
		MIXED AIR DEG F:	0		
PRESENT TEMP SUM OCC:	0	OTHER SETPOINT DESCRIP:			
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	<input type="checkbox"/> N	MIXED AIR DMPR CONTROL:	<input type="checkbox"/> N	IMPLEMENT DEMAND LIMIT CNTRLS?	<input type="checkbox"/> N
MAX OA DMPR CONTROL:	<input type="checkbox"/> N	ECONOMIZER DB CONTROL:	<input type="checkbox"/> N	TIME CLOCK:	<input type="checkbox"/> N
RET AIR DMPR CONTROL:	<input type="checkbox"/> N	ECONOMIZER WB CONTROL:	<input type="checkbox"/> N	TIME CLOCK OPERATIONAL?	<input type="checkbox"/> N
EXH AIR DMPR CONTROL:	<input type="checkbox"/> N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: AHU-5

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: AHU-6

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU:

SERVES AREA: OFFICES/BAYS

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,600

CFM-CLG: 0

MIN %OA: 15

MAX %OA: 15

**NAMEPLATE**

UNIT MFG: BRYANT

UNIT MODEL: 394GAZ048100

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: MAU-1

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: MAU-2

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,120

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL: GTDM400

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/16/94

LOCATION: FT. RILEY, KS

PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340

AHU NUMBER: MAU-3

AHU LOCATION: BAYS

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAYS

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: KING AIR SYSTEMS

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8340	AHU LOCATION:	MAINT. BAYS
AHU NUMBER:	RAD-1		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	MAINT. BAYS
		% OF BLDG AREA HEATED:	24
AHU UNIT TYPE	INFRARED RADIANT HEATERS	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	0	CFM-CLG:	0
MIN %OA:	0	MAX %OA:	0

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	32	MONTH SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N
MAX OA DMPR CONTROL:	N	ECONOMIZER DB CONTROL:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N
EXH AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLs?	N
		TIME CLOCK:	N
		TIME CLOCK OPERATIONAL?	N

OTHER CONTROLS DESCR:	
CONTROLS COMMENTS:	

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/16/94  
PREPARED BY: AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8340  
AHU NUMBER: RAD-2  
AHU LOCATION: MAINT. BAYS  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAYS  
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.33  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 32  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	18	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	7	9	0
REQ STOP:	0	18	18	18	15	18	0

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: ☐ N  
MIXED AIR DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
RET AIR DMPR CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N  
IMPLEMENT DEMAND LIMIT CNTRLs? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8360

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: N

CONDITIONED SQFT: 39,428

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 24

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8360	AHU NUMBER:	AHU-1	AHU LOCATION:	MEZZANINE
REFRIG SYS # SRVNG AHU:	CH-1	SERVES AREA:	OFFICES	% OF BLDG AREA HEATED:	4
AHU UNIT TYPE		MULTI ZONE		NUMBER OF ZONES IF MZ UNIT: 4	
CFM-HTG:	2,460	CFM-CLG:	2,460	MIN %OA:	20
		MAX %OA:	100		

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	2	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:			

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	24	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	8	7	8	7	8	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	SINGLE SETPOINT		
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360

AHU NUMBER: HV-1

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,270

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360

AHU NUMBER: HV-2

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,660

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360  
AHU NUMBER: HV-3  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: BAY  
% OF BLDG AREA HEATED: 5  
AHU UNIT TYPE: HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0  
CFM-HTG: 6,490  
CFM-CLG: 0  
MIN %OA: 100  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: ☒ FEB: ☒ MAR: ☒ APR: ☒ MAY: ☐ JUN: ☐ JUL: ☐ AUG: ☐ SEP: ☐ OCT: ☒ NOV: ☒ DEC: ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360

AHU NUMBER: HV-4

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,870

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360  
AHU NUMBER: HV-5  
AHU LOCATION: MEZZANINE  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: BAY  
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE HEATING AND VENTILATING  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,360  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360

AHU NUMBER: HV-6

AHU LOCATION: MEZZANINE

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,540

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 36

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

CLIENT CNTRCT #: DACA 01-94-D-0033

LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

## AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8360

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAYS

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAYS

% OF BLDG AREA HEATED: 24

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

## NAMEPLATE

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

## COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

## SCHEDULE

DAY SCHEDULE NO: 24

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## CONTROLS

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8360

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒ **BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NO. 2 OIL

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:



CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:

BLR CAP OUTPUT (BTUH):

4,430,000

UNIT MODEL:

BLR CAP INPUT (BTUH):

5,537,500

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO:

24

MONTH SECHDULE NO:

1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP:

10

PUMP MFG:

PUMP SERVICE: HW PUMP

PUMP MODEL:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS**

BLDG NUMBER: 8360 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	7		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 24 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="15"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8370

AHU NUMBER: AHU-1

AHU LOCATION: MER ON CEILING

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,180

CFM-CLG: 2,180

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG: STERLING

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8370

AHU NUMBER: AHU-2

AHU LOCATION: MER

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: OFFICES/ STORAGE

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,750

CFM-CLG: 1,750

MIN %OA: 28

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/17/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8370

AHU NUMBER: HV-1

AHU LOCATION: 108

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: OFFICES

% OF BLDG AREA HEATED: 15

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,900

CFM-CLG: 0

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8370  
AHU NUMBER: HV-2  
AHU LOCATION: 109  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: OFFICES/STORAGE  
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: Y IMPLEMENT DEMAND LIMIT CNTRL? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8370

AHU NUMBER: MAU-1

AHU LOCATION: MAY CEILING

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: BAY

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,240

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8370  
AHU NUMBER: RAD-1  
AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAY  
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

## BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8370

BOILER RM LOCATION: MER

### BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☐

☐ BOILER

BOILER TAG: \_\_\_\_\_

BOILER TYPE: \_\_\_\_\_

FUEL TYPE: \_\_\_\_\_

☒ CONVERTER

CONVERTER TAG: CV-1

CONVERTER TYPE: STM TO HW

CONV HT SOURCE: STEAM FROM CENTRAL PLANT

☒

CENTRAL PLANT DIRECT

### NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: \_\_\_\_\_

UNIT MODEL: \_\_\_\_\_

BLR CAP OUTPUT (BTUH): 400,000

BLR CAP INPUT (BTUH): 400,000

COMMENTS: \_\_\_\_\_

### SCHEDULE

DAYS SCHEDULE NO: 39

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS: \_\_\_\_\_

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC

RESET CONTROLS: N

OPERATING SETPOINT: 0 DEG F or PSIG

TYPE OF BURNER CONTROLS: \_\_\_\_\_

CONTROLS COMMENTS: \_\_\_\_\_

### HW PUMP

PUMP TAG: 1

PUMP HP: 3

PUMP MFG: \_\_\_\_\_

PUMP SERVICE: HW PUMP

PUMP MODEL: \_\_\_\_\_

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/17/94

PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8370

BLDG NAME: VEH MNT SHOP ORG

REF. UNIT NUMBER/TAG: CH-1

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EN048320  
CHILLER SERIAL NO: P607501  
CHILLER V: 230  
CHILLER AMPS: 25  
CHILLER PH: 0  
CHILLER CAP (TONS): 5

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 2.5  
TOWER FAN HP: 0.25

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 39

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/17/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8370 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	08AFP007500	# OF TOWER FANS:	1
CHILLER SERIAL NO:	3386G70589	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	2.9
CHILLER AMPS:	26.7	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8380

BLDG NAME: VEH MNT SHOP ORG

ELECTRIC METER: N

CONDITIONED SQFT: 73,400

GAS METER: N

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 39

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: AHU-1

AHU LOCATION: 202

REFRIG SYS # SRVNG AHU: CH-1

SERVES AREA: 2ND FLOOR SHOPS

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,100

CFM-CLG: 2,100

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: AHU-2

AHU LOCATION: SPEC SHOP

REFRIG SYS # SRVNG AHU: CH-2

SERVES AREA: 1ST FLOOR AREA A

% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,520

CFM-CLG: 1,520

MIN %OA: 5

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 2

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	ELECTRIC	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380  
AHU NUMBER: AHU-3 AHU LOCATION: 202  
REFRIG SYS # SRVNG AHU: CH-3 SERVES AREA: 2ND FLOOR SHOPS  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,100 CFM-CLG: 2,100  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: Y TIME CLOCK: Y  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8380	AHU LOCATION:	127
AHU NUMBER:	AHU-4		
REFRIG SYS # SRVNG AHU:	CH-4	SERVES AREA:	1ST FLOOR AREA B
		% OF BLDG AREA HEATED:	2
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	2,245	CFM-CLG:	2,245
MIN %OA:	10	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	1.5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	39	MONTH SCHEDULE NO:	3									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:			
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	Y	TIME CLOCK:	Y
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: AHU-5

AHU LOCATION: AREA C OFFICES

REFRIG SYS # SRVNG AHU: CH-5

SERVES AREA: AREA C OFFICES

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,305

CFM-CLG: 2,305

MIN %OA: 5

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: Y

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: AHU-6

AHU LOCATION: 103

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: 1ST FLOOR AREA A

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 15,650

CFM-CLG: 0

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 15

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: AHU-7

AHU LOCATION: 114

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: 1ST FLOOR AREA B

% OF BLDG AREA HEATED: 5

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,980

CFM-CLG: 0

MIN %OA: 5

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	GAS	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: MAU-1

AHU LOCATION: MAINT. BAY AREA

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE ☐HEATING COIL: NONE ☐REHEAT COIL: NONE ☐HUMIDIFIER: NONE ☐COOLING COIL: NONE ☐**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☒RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380  
AHU NUMBER: MAU-2 AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU: SERVES AREA: MAINT. BAY AREA  
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 7.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8380	AHU LOCATION:	MAINT. BAY AREA
AHU NUMBER:	MAU-3		
REFRIG SYS # SRVNG AHU:		SERVES AREA:	MAINT. BAY AREA
		% OF BLDG AREA HEATED:	2
AHU UNIT TYPE	MAKE-UP AIR UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	4,800	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	3	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	39	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN: <input checked="" type="checkbox"/>	FEB: <input checked="" type="checkbox"/>	MAR: <input checked="" type="checkbox"/>	APR: <input checked="" type="checkbox"/>	MAY: <input type="checkbox"/>	JUN: <input type="checkbox"/>	JUL: <input type="checkbox"/>	AUG: <input type="checkbox"/>	SEP: <input type="checkbox"/>	OCT: <input checked="" type="checkbox"/>	NOV: <input checked="" type="checkbox"/>	DEC: <input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:	
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:	
		OTHER SETPOINT DEG F:	0
MIN OA DMPR CONTROL:	<input type="checkbox"/> N	MIXED AIR DMPR CONTROL:	<input type="checkbox"/> N
MAX OA DMPR CONTROL:	<input type="checkbox"/> Y	ECONOMIZER DB CONTROL:	<input type="checkbox"/> N
RET AIR DMPR CONTROL:	<input type="checkbox"/> N	ECONOMIZER WB CONTROL:	<input type="checkbox"/> N
EXH AIR DMPR CONTROL:	<input type="checkbox"/> N	IMPLEMENT DEMAND LIMIT CNTRLs?	<input type="checkbox"/> N
		TIME CLOCK:	<input type="checkbox"/> Y
		TIME CLOCK OPERATIONAL?	<input type="checkbox"/> N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380  
AHU NUMBER: MAU-4 AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU: SERVES AREA: MAINT. BAY AREA  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE MAKE-UP AIR UNIT NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800 CFM-CLG: 0  
MIN %OA: 100 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 3 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLs? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: Y  
RET AIR DMPR CONTROL: N ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380  
AHU NUMBER: MAU-5  
AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAY AREA  
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,600  
MIN %OA: 100

CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: MAU-6

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED:

4

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,600

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: NONE

☐

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380  
AHU NUMBER: MAU-7  
AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAY AREA  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,400  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: Y  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: MAU-8

AHU LOCATION: BAY

REFRIG SYS # SRVNG AHU:

SERVES AREA: BAY AREA

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: RAD-1

AHU LOCATION: MAINT. BAY - A

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY - A

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: RAD-2

AHU LOCATION: MAINT. BAY - B

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY - B

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: RAD-3

AHU LOCATION: MAINT. BAY - C

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY - C

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8380

AHU NUMBER: RAD-4

AHU LOCATION: MAINT. BAY - D

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY - D

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: Y

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8380 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38N060630DL	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>
OTHER INDICATIONS:			
CONTROLS COMMENTS:			

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8380 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-2  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38N060630DL	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	3		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0
PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8380 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-3 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-3  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38N060630DL	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5.5		

COMMENTS: **SCHEDULE**

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	<input type="text"/>
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

### REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8380 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-4 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-4  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38N060630DL	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5		
COMMENTS:			

### SCHEDULE

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATIONS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8380 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-5 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-5  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38N0G0630DL	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	4		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI:	<input type="checkbox"/>	TEMP LITE HI:	<input type="checkbox"/>	OTHER INDICATORS:
PRESS LITE LOW:	<input type="checkbox"/>	TEMP LITE LOW:	<input type="checkbox"/>	
PRESS GAUGES:	<input type="checkbox"/>	TEMP GAUGES:	<input type="checkbox"/>	

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/13/94

PREPARED BY: JM/AJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER: 8390

BLDG NAME: TAC EQUIP SHOP

ELECTRIC METER: Y

CONDITIONED SQFT: 24,755

GAS METER: Y

SUSPECT ACM: N

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO: 51

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390  
AHU NUMBER: AHU-1  
AHU LOCATION: MER  
REFRIG SYS # SRVNG AHU: CH-1  
SERVES AREA: 1ST 2ND FLOOR OFFICES  
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,475  
MIN %OA: 10  
CFM-CLG: 3,475  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG: TRANE  
SUPPLY FAN HP: 3  
SUPPLY FAN MTR MFG:  
SUPPLY FAN MTR MODEL:  
COMMENTS:  
UNIT MODEL:  
RET/EXH FAN HP: 0  
RET/EXH FAN MTR MFG:  
RET/EXH FAN MTR MODEL:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 51  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: PNEUMATIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390

AHU NUMBER: HV-1

AHU LOCATION: 102

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: 1ST FLR OFFICES

% OF BLDG AREA HEATED: 12

AHU UNIT TYPE HEATING AND VENTILATING

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,345

CFM-CLG: 0

MIN %OA: 33

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 51

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: Y

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390  
AHU NUMBER: MAU-1  
AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAY  
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,700  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 51  
MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0  
COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0  
MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐ N  
MAX OA DMPR CONTROL: ☐ Y  
RET AIR DMPR CONTROL: ☐ N  
EXH AIR DMPR CONTROL: ☐ N  
MIXED AIR DMPR CONTROL: ☐ N  
ECONOMIZER DB CONTROL: ☐ N  
ECONOMIZER WB CONTROL: ☐ N  
IMPLEMENT DEMAND LIMIT CNTRLS? ☐ N  
TIME CLOCK: ☐ N  
TIME CLOCK OPERATIONAL? ☐ N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390

AHU NUMBER: MAU-2

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY

% OF BLDG AREA HEATED: 10

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,700

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input checked="" type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 51

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390

AHU NUMBER: UH-1

AHU LOCATION: MAINT. BAY NORTH

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY NORTH

% OF BLDG AREA HEATED: 23

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 51

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLS? ☐MAX OA DMPR CONTROL: ☐ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/13/94

LOCATION: FT. RILEY, KS

PREPARED BY: JM/AJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390

AHU NUMBER: UH-2

AHU LOCATION: MAINT. BAY SOUTH

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT BAY SOUTH

% OF BLDG AREA HEATED: 23

AHU UNIT TYPE UNIT HEATER

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	HOT WATER	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 51

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**BOILER AND CONVERTER SURVEY OBSERVATIONS**

BUILDING NUMBER: 8390

BOILER RM LOCATION: MER

**BOILER UNIT**

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

☒**BOILER**

BOILER TAG: BLR-1

BOILER TYPE: HW (UP TO 250 DEG)

FUEL TYPE: NAT. GAS

☐ **CONVERTER**

CONVERTER TAG:

CONVERTER TYPE:

CONV HT SOURCE:

☐

CENTRAL PLANT DIRECT

**NAMEPLATE**

% AREA HEATED BY BB RADIATION: 10

BOILER MFG: AJAX

UNIT MODEL: WGFD3250

BLR CAP OUTPUT (BTUH): 2,600,000

BLR CAP INPUT (BTUH): 3,250,000

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 51

MONTH SECHDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF BLR CONTROLS: ELECTRIC

RESET CONTROLS: ☒ Y

OPERATING SETPOINT: 190 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

**HW PUMP**

PUMP TAG: 1

PUMP HP: 15

PUMP MFG: U S ELECTRIC

PUMP SERVICE: HW PUMP

PUMP MODEL: GB06200151L021R060

## EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

### PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	8390	BLDG NAME:	TAC EQUIP SHOP
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERIMETER OFFICES
SOURCE OF HEATING:		SERVES AREA:	1ST 2ND FLOORS
RADIATION UNIT TYPE:	HW	% AREA HTG:	10

### SCHEDULE

DAYS SCHEDULE NO: 51

MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/13/94  
PREPARED BY: JM/AJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8390 BLDG NAME: TAC EQUIP SHOP  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	TRANE	TOWER MFG:	COMPRESSOR
CHILLER MODEL:	RAUCB754B	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	480	TOWER FAN AMPS:	2.7
CHILLER AMPS:	12.3	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	8		
COMMENTS:			

**SCHEDULE**

DAYS SCHEDULE NO: 51 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0 CNWS SETPOINT: 0  
CWR SETPOINT: 0 CNWR SETPOINT: 0

PRESS LITE HI: ☐ TEMP LITE HI: ☐ OTHER INDICATORS:  
PRESS LITE LOW: ☐ TEMP LITE LOW: ☐  
PRESS GAUGES: ☐ TEMP GAUGES: ☐

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: JMAJN/AMS

**BUILDING DATA SURVEY OBSERVATIONS**

BLDG NUMBER:  BLDG NAME:   
ELECTRIC METER:  CONDITIONED SQFT:   
GAS METER:   
SUSPECT ACM:

**BUILDING OCCUPANCY SCHEDULE**

BUILDING SCHEDULE NO:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
PRES STOP:	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>	<input type="text" value="24"/>
REQ START:	<input type="text" value="0"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="7"/>	<input type="text" value="9"/>	<input type="text" value="0"/>
REQ STOP:	<input type="text" value="0"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="17"/>	<input type="text" value="15"/>	<input type="text" value="17"/>	<input type="text" value="0"/>

**REMARKS:**

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: AHU-1 AHU LOCATION: 202  
REFRIG SYS # SRVNG AHU: CH-1 SERVES AREA: 2ND FLOOR SHOPS  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,100 CFM-CLG: 2,100  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: AHU-2  
AHU LOCATION: SPEC SHOP  
REFRIG SYS # SRVNG AHU: CH-2  
SERVES AREA: 1ST FOOR AREA A  
% OF BLDG AREA HEATED: 1

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,520  
MIN %OA: 5  
CFM-CLG: 1,520  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 2  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: AHU-3 AHU LOCATION: 2.02  
REFRIG SYS # SRVNG AHU: CH-3 SERVES AREA: 2ND FLOOR SHOPS  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,100 CFM-CLG: 2,100  
MIN %OA: 10 MAX %OA: 100

**NAMEPLATE**

UNIT MFG: UNIT MODEL:  
SUPPLY FAN HP: 1.5 RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG: RET/EXH FAN MTR MFG:  
SUPPLY FAN MTR MODEL: RET/EXH FAN MTR MODEL:  
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39 MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC THERMOSTAT TYPE:  
PRESENT TEMP WINTR OCC: 0 HOT DECK DEG F: 0  
PRESENT TEMP WINTR UNOCC: 0 COLD DECK DEG F: 0  
PRESENT TEMP SUM OCC: 0 MIXED AIR DEG F: 0  
PRESENT TEMP SUM UNOCC: 0 OTHER SETPOINT DESCRIP:  
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N MIXED AIR DMPR CONTROL: N IMPLEMENT DEMAND LIMIT CNTRLS? N  
MAX OA DMPR CONTROL: Y ECONOMIZER DB CONTROL: N TIME CLOCK: N  
RET AIR DMPR CONTROL: Y ECONOMIZER WB CONTROL: N TIME CLOCK OPERATIONAL? N  
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:  
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: AHU-4

AHU LOCATION: 127

REFRIG SYS # SRVNG AHU: CH-4

SERVES AREA: 1ST FLOOR AREA B

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,245

CFM-CLG: 2,245

MIN %OA: 10

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 1.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: AHU-5  
AHU LOCATION: AREA C OFFICES  
REFRIG SYS # SRVNG AHU: CH-5  
SERVES AREA: AREA C OFFICES  
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE SINGLE ZONE  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,305  
MIN %OA: 5  
CFM-CLG: 2,305  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 1.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	DX	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 3  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: Y  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8410	AHU LOCATION:	103
AHU NUMBER:	AHU-6		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	1ST FLOOR AREA A
		% OF BLDG AREA HEATED:	6
AHU UNIT TYPE	SINGLE ZONE	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	15,650	CFM-CLG:	0
MIN %OA:	10	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	0.15	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	39	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:			
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	Y	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: AHU-7

AHU LOCATION: 114

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: 1ST FLOOR AREA B

% OF BLDG AREA HEATED: 13

AHU UNIT TYPE SINGLE ZONE

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,980

CFM-CLG: 0

MIN %OA: 5

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 10

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil

Coil Type

Modulating Valve?

PREHEAT COIL: NONE

☐

HEATING COIL: NONE

☐

REHEAT COIL: NONE

☐

HUMIDIFIER: NONE

☐

COOLING COIL: NONE

☐**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: Y

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: MAU-1

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: MAU-2

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 7.5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: MAU-3

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: MAU-4

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED: 2

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 3

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
ON:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: ☐MIXED AIR DMPR CONTROL: ☐IMPLEMENT DEMAND LIMIT CNTRLs? ☐MAX OA DMPR CONTROL: ☒ECONOMIZER DB CONTROL: ☐TIME CLOCK: ☐RET AIR DMPR CONTROL: ☐ECONOMIZER WB CONTROL: ☐TIME CLOCK OPERATIONAL? ☐EXH AIR DMPR CONTROL: ☐

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: MAU-5  
REFRIG SYS # SRVNG AHU: NONE  
AHU LOCATION: MAINT. BAY  
SERVES AREA: MAINT. BAY AREA  
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,600  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:  
☒ ☒ ☒ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☒ ☒

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLs? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: MAU-6  
AHU LOCATION: MAINT. BAY  
REFRIG SYS # SRVNG AHU: NONE  
SERVES AREA: MAINT. BAY AREA  
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE MAKE-UP AIR UNIT  
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,600  
MIN %OA: 100  
CFM-CLG: 0  
MAX %OA: 100

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 7.5  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE:   
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: Y  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: MAU-7

AHU LOCATION: MAINT. BAY

REFRIG SYS # SRVNG AHU: NONE

SERVES AREA: MAINT. BAY AREA

% OF BLDG AREA HEATED: 6

AHU UNIT TYPE MAKE-UP AIR UNIT

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,400

CFM-CLG: 0

MIN %OA: 100

MAX %OA: 100

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 5

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS: GAS-FIRED

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE:

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRL? N

MAX OA DMPR CONTROL: Y

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER:	8410	AHU LOCATION:	MAINT. BAY
AHU NUMBER:	MAU-8		
REFRIG SYS # SRVNG AHU:	NONE	SERVES AREA:	MAINT. BAY AREA
		% OF BLDG AREA HEATED:	2
AHU UNIT TYPE	MAKE-UP AIR UNIT	NUMBER OF ZONES IF MZ UNIT:	0
CFM-HTG:	6,400	CFM-CLG:	0
MIN %OA:	100	MAX %OA:	100

**NAMEPLATE**

UNIT MFG:		UNIT MODEL:	
SUPPLY FAN HP:	5	RET/EXH FAN HP:	0
SUPPLY FAN MTR MFG:		RET/EXH FAN MTR MFG:	
SUPPLY FAN MTR MODEL:		RET/EXH FAN MTR MODEL:	
COMMENTS:	GAS-FIRED		

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO:	39	MONTH SCHEDULE NO:	1									
SCHEDULE COMMENTS:												
	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:					
PRES START:	0	0	0	0	0	0	0					
PRES STOP:	24	24	24	24	24	24	24					
REQ START:	0	9	7	9	7	9	0					
REQ STOP:	0	17	17	17	15	17	0					
MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS:	ELECTRIC	THERMOSTAT TYPE:			
PRESENT TEMP WINTR OCC:	0	HOT DECK DEG F:	0		
PRESENT TEMP WINTR UNOCC:	0	COLD DECK DEG F:	0		
PRESENT TEMP SUM OCC:	0	MIXED AIR DEG F:	0		
PRESENT TEMP SUM UNOCC:	0	OTHER SETPOINT DESCRIP:			
		OTHER SETPOINT DEG F:	0		
MIN OA DMPR CONTROL:	N	MIXED AIR DMPR CONTROL:	N	IMPLEMENT DEMAND LIMIT CNTRLS?	N
MAX OA DMPR CONTROL:	Y	ECONOMIZER DB CONTROL:	N	TIME CLOCK:	N
RET AIR DMPR CONTROL:	N	ECONOMIZER WB CONTROL:	N	TIME CLOCK OPERATIONAL?	N
EXH AIR DMPR CONTROL:	N				
OTHER CONTROLS DESCR:					
CONTROLS COMMENTS:					



**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: RAD-1  
AHU LOCATION: MAINT. BAY - A  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAY - A  
% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.33  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410  
AHU NUMBER: RAD-2  
AHU LOCATION: MAINT. BAY - B  
REFRIG SYS # SRVNG AHU:   
SERVES AREA: MAINT. BAY - B  
% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0  
MIN %OA: 0

CFM-CLG: 0  
MAX %OA: 0

**NAMEPLATE**

UNIT MFG:   
UNIT MODEL:   
SUPPLY FAN HP: 0.33  
RET/EXH FAN HP: 0  
SUPPLY FAN MTR MFG:   
RET/EXH FAN MTR MFG:   
SUPPLY FAN MTR MODEL:   
RET/EXH FAN MTR MODEL:   
COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39  
MONTH SCHEDULE NO: 1  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC  
THERMOSTAT TYPE: SINGLE SETPOINT  
PRESENT TEMP WINTR OCC: 0  
PRESENT TEMP WINTR UNOCC: 0  
PRESENT TEMP SUM OCC: 0  
PRESENT TEMP SUM UNOCC: 0  
HOT DECK DEG F: 0  
COLD DECK DEG F: 0  
MIXED AIR DEG F: 0  
OTHER SETPOINT DESCRIP:   
OTHER SETPOINT DEG F: 0  
MIN OA DMPR CONTROL: N  
MAX OA DMPR CONTROL: N  
RET AIR DMPR CONTROL: N  
EXH AIR DMPR CONTROL: N  
MIXED AIR DMPR CONTROL: N  
ECONOMIZER DB CONTROL: N  
ECONOMIZER WB CONTROL: N  
IMPLEMENT DEMAND LIMIT CNTRLS? N  
TIME CLOCK: N  
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:   
CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1406-001

CLIENT CNTRCT #: DACA 01-94-D-0033

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: RAD-3

AHU LOCATION: MAINT. BAY - C

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY - C

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

MIXED AIR DEG F: 0

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DESCRIP:

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLs? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: JMAJN/AMS

**AIR HANDLING UNIT SURVEY OBSERVATIONS**

BUILDING NUMBER: 8410

AHU NUMBER: RAD-4

AHU LOCATION: MAINT. BAY - D

REFRIG SYS # SRVNG AHU:

SERVES AREA: MAINT. BAY - D

% OF BLDG AREA HEATED: 14

AHU UNIT TYPE INFRARED RADIANT HEATERS

NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0

CFM-CLG: 0

MIN %OA: 0

MAX %OA: 0

**NAMEPLATE**

UNIT MFG:

UNIT MODEL:

SUPPLY FAN HP: 0.33

RET/EXH FAN HP: 0

SUPPLY FAN MTR MFG:

RET/EXH FAN MTR MFG:

SUPPLY FAN MTR MODEL:

RET/EXH FAN MTR MODEL:

COMMENTS:

**COILS**

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	<input type="checkbox"/>
HEATING COIL:	NONE	<input type="checkbox"/>
REHEAT COIL:	NONE	<input type="checkbox"/>
HUMIDIFIER:	NONE	<input type="checkbox"/>
COOLING COIL:	NONE	<input type="checkbox"/>

**SCHEDULE**

DAY SCHEDULE NO: 39

MONTH SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0

HOT DECK DEG F: 0

PRESENT TEMP WINTR UNOCC: 0

COLD DECK DEG F: 0

PRESENT TEMP SUM OCC: 0

OTHER SETPOINT DESCRIP:

PRESENT TEMP SUM UNOCC: 0

OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N

MAX OA DMPR CONTROL: N

ECONOMIZER DB CONTROL: N

TIME CLOCK: N

RET AIR DMPR CONTROL: N

ECONOMIZER WB CONTROL: N

TIME CLOCK OPERATIONAL? N

EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: JMAJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8410 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-1  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EN060630DL  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 5

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.33

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 39 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐ N  
PRESS LITE LOW: ☐ N  
PRESS GAUGES: ☐ N

TEMP LITE HI: ☐ N  
TEMP LITE LOW: ☐ N  
TEMP GAUGES: ☐ N

OTHER INDICATIONS:

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: JMAJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8410

BLDG NAME: VEH MNT SHOP ORG

REF. UNIT NUMBER/TAG: CH-2

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EN060630DL  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 3

TOWER MFG:  
# OF TOWER FANS: 1  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.33

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 39

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATIONS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS

EMC NO: 1405-001

CLIENT CNTRCT #: DACA 01-84-D-0032

DATE: 10/14/94

LOCATION: FT. RILEY, KS

PREPARED BY: JMAJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8410

BLDG NAME: VEH MNT SHOP ORG

REF. UNIT NUMBER/TAG: CH-3

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-2

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EN060630DL  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 5.5

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 0  
TOWER FAN AMP3: 0  
TOWER FAN HP: 0.33

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 39

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: ☐TEMP LITE HI: ☐

OTHER INDICATORS:

PRESS LITE LOW: ☐TEMP LITE LOW: ☐PRESS GAUGES: ☐TEMP GAUGES: ☐

CONTROLS COMMENTS:

**EMC ENGINEERS, INC.**

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001  
DATE: 10/14/94  
PREPARED BY: JMAJN/AMS

**REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS**

BLDG NUMBER: 8410 BLDG NAME: VEH MNT SHOP ORG  
REF. UNIT NUMBER/TAG: CH-4 LOCATION (MER#): OUTSIDE  
AHU'S SERVED: AHU-4  
UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

**NAMEPLATE**

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38EN060630DL	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5		

COMMENTS:

**SCHEDULE**

DAYS SCHEDULE NO: 33 MONTHS SCHEDULE NO: 2  
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CONTROLS**

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0  
CWR SETPOINT: 0

CNWS SETPOINT: 0  
CNWR SETPOINT: 0

PRESS LITE HI: ☐  
PRESS LITE LOW: ☐  
PRESS GAUGES: ☐

TEMP LITE HI: ☐  
TEMP LITE LOW: ☐  
TEMP GAUGES: ☐

OTHER INDICATIONS:

CONTROLS COMMENTS:



# EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASIBILITY STUDY FOR INSTALLATION OF UMCS  
CLIENT CNTRCT #: DACA 01-94-D-0033  
LOCATION: FT. RILEY, KS

EMC NO: 1406-001

DATE: 10/14/94

PREPARED BY: JMAJN/AMS

## REFRIGERATION EQUIPMENT SURVEY OBSERVATIONS

BLDG NUMBER: 8410

BLDG NAME: VEH MNT SHOP ORG

REF. UNIT NUMBER/TAG: CH-5

LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-5

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

### NAMEPLATE

CHILLER MFG: CARRIER  
CHILLER MODEL: 38EN060630DL  
CHILLER SERIAL NO:  
CHILLER V: 460  
CHILLER AMPS: 0  
CHILLER PH: 0  
CHILLER CAP (TONS): 4

TOWER MFG:  
# OF TOWER FANS: 2  
TOWER FAN V: 0  
TOWER FAN AMPS: 0  
TOWER FAN HP: 0.33

COMMENTS:

### SCHEDULE

DAYS SCHEDULE NO: 39

MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON: JAN: FEB: MAR: APR: MAY: JUN: JUL: AUG: SEP: OCT: NOV: DEC:

☐ ☐ ☐ ☐ ☒ ☒ ☒ ☒ ☒ ☐ ☐ ☐

### CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT: 0

CNWS SETPOINT: 0

CWR SETPOINT: 0

CNWR SETPOINT: 0

PRESS LITE HI: N

TEMP LITE HI: N

OTHER INDICATIONS:

PRESS LITE LOW: N

TEMP LITE LOW: N

PRESS GAUGES: N

TEMP GAUGES: N

CONTROLS COMMENTS: